
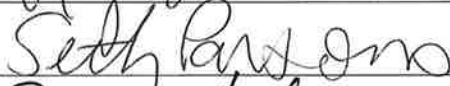
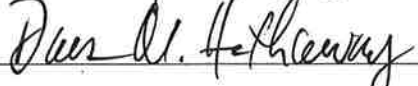



DISCIPLINARY MEDIA LITERACY: A MULTIPLE CASE STUDY EXAMINING A  
MEDIA LITERACY ONLINE PROFESSIONAL DEVELOPMENT FOR HIGH  
SCHOOL TEACHERS

by

Matthew Korona  
A Dissertation  
Submitted to the  
Graduate Faculty  
of  
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of  
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## **Dedication**

This is dedicated to my wife, Katherine; my daughters, Ellery and Felicity; and my dog, Mollie. Thank you for all of your love and support throughout this journey.

## Acknowledgements

First, I would like to acknowledge my family, who has provided me strength throughout this journey. To my wife, Katherine: Thank you for always encouraging me to make this dream a reality. To my daughters, Ellery and Felicity: Thank you for all of the joy you bring me and inspiring me to push forward. To my dog, Mollie: Thank you for always listening and helping me brainstorm this work.

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## **Abstract**

### **DISCIPLINARY MEDIA LITERACY: A MULTIPLE CASE STUDY EXAMINING A MEDIA LITERACY ONLINE PROFESSIONAL DEVELOPMENT FOR HIGH SCHOOL TEACHERS**

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George Mason University, 2022

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This dissertation was conducted using case study methodology to examine how teachers of different content areas integrate media literacy into their instruction to address the specialized knowledge and discourses of their disciplines after participating in a media literacy online professional development, how they applied the content from the online professional development to design media literacy instruction, and the changes in their perceived competency with the instructional integration of media literacy as well as their own media literacy while participating in a media literacy online professional development. Findings indicated that teachers incorporated media literacy strategies and concepts to privilege knowledge, ways of making meaning, and discourses specific to their disciplines. They applied content from the online professional development to build background knowledge, offer explicit media literacy instruction, give students opportunities to apply media literacy strategies, and incorporate media creation to

demonstrate student learning. They perceived their media literacy instructional and personal competency changed with critical consumption but not with creating or publishing media. Recommendations include implementing a disciplinary media literacy framework to design and deliver instruction, refining the online professional development, and leveraging media literacy concepts for teaching advocacy and social justice as well as teachers' own online civic engagement.

## **Chapter One**

Many school districts have placed a greater emphasis on one-to-one computing initiatives aimed at providing distance and remote instruction due to the COVID-19 pandemic (Bushweller, 2020; Rauf, 2020). While shifting to distance learning heightened the urgency for devices and internet access for students, the number of districts employing one-to-one initiatives were increasing prior to the pandemic (Cavanagh, 2018). At the same time, an increasing number of adolescents have gained access to internet-abled devices to use outside of school as well (Anderson & Jiang, 2018). This access to online environments exposes adolescents to a variety of both trustworthy and deceptive online information sources (Ireton & Posetti, 2018). However, students of all ages often struggle to decipher the credibility of online content (Wineburg et al., 2016).

The issue of students struggling to evaluate the veracity of online information has been well-documented (LaGarde & Hudgins, 2018; Wineburg et al., 2016; Zhang & Duke, 2011). For example, students often focus only on surface features of online text, accept evidence without questioning its legitimacy, and misunderstand the affordances of Wikipedia (Breakstone et al., 2018). Specifically, adolescents struggle with differentiating online persuasive advertisements from informative articles, identifying misinformation and disinformation through social media, and examining photographs for inconsistencies that indicate photo manipulation (Wineburg et al., 2016). As adolescents

gain increasing access to Internet-enabled devices inside and outside of school, they must acquire the necessary skills, strategies, and dispositions to evaluate the bombardment of information they receive.

Scholars and practitioners point to media literacy as one potential solution to combat online misinformation (Huguet et al., 2019). Media literacy is defined as “the ability to access, analyze, evaluate, create, and act using all forms of communication” (National Association for Media Literacy Education, 2007, Basic Definition section). Since media literacy promotes constructivism and critical thinking skills (Hobbs, 2011; Westbrook, 2011), some scholars and practitioners advocate for media literacy instruction to be embedded into core content lessons (Comber & Grant, 2018; Huguet et al., 2019; Scheibe, 2004). Huguet et al. (2019) explained an integrated approach to media literacy education presents media literacy as a worldview rather than merely a skillset, approaches the application of media literacy across multiple contexts, and allows schools to teach relevant media literacy skills without creating additional stand-alone courses and acquiring additional resources. Thus, core content teachers have an opportunity to provide relevant learning opportunities designed to equip students with the skills, strategies, and dispositions needed to access, analyze, evaluate, create, reflect, and publish media messages.

In addition to the skills, strategies, and dispositions needed to consume and produce media messages, media literacy empowers students to approach media through a critical lens to advocate for social issues. Media messages reflect and create popular culture simultaneously (Alvermann & Hagood, 2000). For example, as individuals



consume information from media, both credible and deceptive, they must think critically about the information they deem as true and choose the information to accept as their reality. At the same time, media consumers must consider that all media messages contain some form of bias (Funk et al., 2016). Through a critical lens, students consider the political, ideological, and cultural context surrounding the media messages and are given the opportunity within content area instruction to create counternarratives that challenges widely accepted narratives (Alvermann & Hagood, 2000; Funk et al., 2016; Garcia et al., 2013). Likewise, media literacy empowers students to reflect about different audiences' potential interpretations of media messages. Audiences from different cultures, races, classes, and genders will interpret media messages differently depending on their values, beliefs, and prior knowledge (Alvermann & Hagood; Funk et al., 2016). Thus, integrating media literacy into content area instruction is not only essential for students to produce and consume media messages but also to understand the impact of media messages on society and culture.

Since each academic discipline values specific knowledge and skills (Rainey & Moje, 2012; Shanahan & Shanahan, 2012), the context in which media literacy is implemented changes depending on the content area. Each discipline engages with different media literacy content and focuses on evaluating different aspects of media messages (Hobbs & Jensen, 2009). Instructional choices surrounding the implementation of media literacy education within classroom instruction is dependent upon the content area in which it is applied. For example, teachers from different content areas value different aspects of media literacy (Hobbs & Tuzel, 2017; McClune & Alexander, 2015).

Also, specific learning goals influence the type of media formats that are implemented (Cherner & Curry, 2019). Further, the prior knowledge and cultural background of teachers and students impacts the evaluation and creation of media messages (Hobbs et al., 2018). Thus, to further explore how media literacy can be implemented across the content areas, it is important to understand the unique knowledge, abilities, vocabulary, and tools related to each discipline.

To ensure teachers across academic disciplines have the knowledge to offer effective media literacy instruction to students, they must be provided with the professional learning opportunities and curricular resources necessary for learning these skills and teaching them to students. Hobbs (2017) suggested that having teachers develop their own media literacy lessons can be an effective form of media literacy education that can prepare teachers to provide media literacy instruction to students. Although packaged curriculums related to media literacy such as Common Sense Education and Be Internet Awesome can be helpful to educators who lack expertise and time to create curriculum materials themselves (Hobbs, 2017), teachers who are involved in the curriculum design process are more likely to implement their own curricular resources into instruction because they have a greater sense of ownership of the material (Cviko et al., 2015). Teachers benefit from embedded opportunities to collaboratively design curricular resources within professional development by becoming active learners, activating prior knowledge, applying new competencies, and restructuring their curricular and pedagogical approaches (Voogt et al., 2015). Thus, as teachers collaboratively create curricular resources during professional development, they not only design

implementable classroom materials but also internalize and apply relevant content knowledge as well.

School districts prior shift to distance learning and increased emphasis for access to digital tools for both teachers and students created the potential for new, innovative methods for professional development for teachers (Geller, 2020). Specifically, online professional development is an efficient approach to deliver teacher learning opportunities for topics that are not incorporated into the school district's professional development plan, access to collaboration with colleagues beyond their school, and receive advice from experts outside of the school district (Bates et al., 2016). Additionally, teachers reported that online professional development provided beneficial, relevant learning experiences applicable to their classroom, and they appreciated the ability to complete assignments at their own pace, access to learning resources at their convenience, and collaborate in reflective activities with other educators (Parsons et al., 2019). Therefore, online professional development is one approach for delivering opportunities for teachers to learn media literacy strategies to implement into their content area instruction.

### **Significance of the Problem**

The majority of studies concerning media literacy education for teachers have occurred in the higher education setting focusing on preservice teachers (Huguet et al., 2019). Similarly, the majority of K12 classroom studies focused on student interaction with media literacy concepts rather than teachers' pedagogical practices (Huguet et al., 2019). Without knowledge of the classroom practices of teachers across academic

disciplines, learning opportunities for teachers related to media literacy and relevant to specific content areas cannot be effectively designed and implemented. Thus, capturing practicing teachers' perspectives about their media literacy instructional practice before, during, and after participating in professional development related to media literacy is an important step toward preparing teachers for the design and implementation of effective content area specific media literacy classroom instruction.

Integrating media literacy into classroom instruction is not a new idea. For example, the National Association for Media Literacy Education (2020) has outlined core principles aimed at promoting inquiry-based and expressive skills related to media. In addition to the National Association for Media Literacy Education's core principles, the RAND Corporation (Huguet et al., 2019) lists several media literacy skills and strategies they define as competencies to combat online misinformation and disinformation. Relatedly, the Stanford History Education Group suggested lateral reading, which is a strategy used by professional fact checkers to determine whether online information is credible (Wineburg & McGrew, 2019). However, a consensus for best practices to teach media literacy strategies to students within content instruction has not been reached. Further examination of how these media literacy concepts and strategies align with content teachers' pedagogy across the content areas is needed to promote media literacy education across content areas.

Numerous curricular resources, media literacy frameworks, and learning opportunities offered by various organizations exist. However, many of the existing approaches to media literacy education focus on student critical thinking, evaluation, and

production skills without offering teachers an instructional approach for integration. For example, the CRAAP (currency, relevance, authority, accuracy, and purpose) test offers students a checklist aimed to determine the credibility of information sources (Blakeslee, 2004). Similarly, the WWWDOT framework offers students questions to determine the credibility of websites based on authorship, purpose, date of publication, whether it aligns with the students' need, organization of the web site, and whether it can help the student in the future (Zhang & Duke, 2011; Zhang et al., 2011). Likewise, Forzani (2019) presented a three-tiered framework examining the content, source, and context to critically evaluate online sources. While these examples promote media literacy related practices within the classroom, these models do not incorporate pedagogy to align with content instruction. The lack of pedagogy in these models may leave teachers wondering how media literacy education can align with their content curriculum and be presented to students effectively and meaningfully.

Furthermore, focusing on teacher education, a majority of in-service teacher training programs are stand-alone workshops designed by non-profits and other organizations to teach the integration of their general media literacy curriculums (Huguet et al., 2019). Learning about generic media literacy frameworks, strategies, and curriculums is a starting point, but teachers must consider how these resources can seamlessly fit within their content curriculum to offer students relevant learning opportunities. Therefore, teachers could benefit from guidelines that are specific to individual content areas and media literacy learning opportunities to assist them with planning instruction that incorporates media literacy. Accounting for each discipline's

unique knowledge, abilities, vocabulary, and tools when designing content instruction related to media literacy is one step toward effective media literacy education.

Although calls for a greater focus on media literacy education have been made by scholars and practitioners, research on instructional practices for integrating media literacy across the content areas is limited. This study contributes to an understanding of the instructional planning process, pedagogies, skills, and strategies teachers use to integrate media literacy across the content areas. Studying teachers' participation in an online professional development opportunity focusing on the instructional integration of media literacy within English language arts, science, and social studies classrooms informed the professional learning opportunity's influence on teachers' instructional planning of media literacy instruction, perceived competency of their instructional integration of media literacy, and their perceived competency of their own media literacy. The instructional integration of media literacy in the math classroom was not explored in this study. While current literature connecting media literacy and math point to interdisciplinary project-based learning (Yang et al., 2009), this study examined how media literacy education is integrated within each content area as well as explored the differences across content areas in isolation. Each teacher learner collaborated within a specific content area design team without collaborating with members from other content areas. Also, relevant literature related to media literacy and math focuses on incorporating data literacy and the decoding of charts and graphs from the Internet (Pacheco & Crawford-Ferre, 2018) into instruction. These topics were not covered in the online professional development. Although future research should explore the

instructional integration of media literacy in math, the majority of the content in the 9-week online professional development was not relevant for math teachers. Thus, this study addressed gaps in media literacy literature related to the potential teaching practices for the instructional integration of media literacy as well as teacher education opportunities intended to equip educators with the necessary media literacy and pedagogical skills to integrate media literacy education across content areas including English language arts, social studies, and science.

### **Purpose of the Study**

With an increasing number of teens reporting being online almost constantly (Anderson & Jiang, 2018), teachers must place a greater emphasis on equipping students with the skills, strategies, and dispositions to evaluate the information they consume. While more states are creating media literacy standards aimed at combatting online misinformation through classroom instruction (Media Literacy Now, 2022), how teachers will apply these standards within their content area instruction is unknown. Since an integrated approach of media literacy allows teachers to apply media literacy skills and strategies within the context of content area instruction (Huguet et al., 2019), teachers must consider the unique knowledge, abilities, vocabulary, and tools when planning for the instructional integration of media literacy. While many current frameworks related to media literacy focus on students evaluating online information and producing media without incorporating pedagogy, incorporating a disciplinary-specific lens to the design of content instruction promotes an inquiry-based approach that accounts for the specific knowledge, language, text, tools, and evaluation strategies (Moje, 2015; Rainey & Moje,

2012) of each content area. The purpose of this study was to examine how teachers integrate media literacy into their content instruction to address the specialized knowledge and discourses of their disciplines after participating in a media literacy online professional development, how they applied the content from the online professional development to design media literacy instruction, and the changes in their perceived competency with the instructional integration of media literacy as well as their own media literacy while participating in the online professional development.

### **Research Questions**

This study examined how teachers integrate media literacy into their content instruction to address the specialized knowledge and discourses of their disciplines after participating in a media literacy online professional development, how they applied the content from the online professional development to design media literacy instruction, and the changes in their perceived competency with the instructional integration of media literacy as well as their own media literacy while participating in the online professional development. The following questions guided the study:

- 1.) After participating in an online professional development, how do teachers of different content areas differ in their delivery of media literacy instruction to address the specialized knowledge and discourses of their disciplines?
- 2.) In what ways do teachers apply the content from online professional development on the instructional integration of media literacy to design media literacy instruction?



- 3.) How do teachers' perceptions of their competency with the instructional integration of media literacy change when they participate in online professional development about integrating media literacy into their content area?
- 4.) How do teachers' perceptions of their own media literacy competency change when they participate in online professional development designing for media literacy in content instruction?

### **Theoretical Perspective**

Six secondary English language arts, science, and social science teachers attended synchronous and asynchronous online professional development sessions related to the integration of media literacy into their core content instruction. Asynchronous sessions focused on promoting reflection and online discussion related to the application and teaching of media literacy. During the synchronous sessions, teachers engaged in constructivist learning experiences such as collaborative activities and created curricular resources aligning media literacy and their content areas in a content area design team. Although not explicitly covered in the online professional development modules, teacher learners were encouraged to implement constructivist teaching practices that situate media literacy within their content instruction. Therefore, the theoretical perspective informing the conceptual framework of this study was constructivism.

### ***Constructivism***

The constructivist perspective is interwoven throughout this study's conceptual framework. Constructivism emphasizes the active construction of knowledge through

experiences and interaction within a given environment by building upon previous knowledge (Tracey & Morrow, 2017). Constructivism emerged as an alternative to behaviorism, which promoted rote learning, repeated practice, and external motivation to demonstrate mastery of a given skill (Fosnot & Perry, 2005). In behaviorist classrooms, the teacher is considered the gatekeeper of knowledge and students as empty receptacles waiting to be filled with knowledge from the teacher (Dewey, 1938). Conversely, Dewey (1938) posited a shift to progressive education, now known as constructivism, where the teacher acts as a facilitator, and students work collaboratively to solve real-world problems. Teachers in constructivist classrooms give students freedom to engage with learning to emphasize cognitive development and deep understanding of the process of completing a given task (Dewey, 1938; Fosnot & Perry, 2005). Through a constructivist perspective, learning is development (Fosnot & Perry, 2005) emphasizing the role of environment, social collaboration, and problem solving skills (Tracey & Morrow, 2017) intended to be transferred outside of the classroom (Bednar et al., 2009).

The constructivist perspective underscores the importance of interacting with others and the environment. Dewey (1938) explained that individuals interact with the world around them throughout their lives and learn from their participation in the world. Individuals construct meaning from the structures, language, activities, and other stimuli within the physical and social world (Fosnot & Perry, 2005). Constructivists believe that individuals make inferences and fill in gaps of their knowledge when attempting to comprehend sensory stimuli such as verbal and written communication (Tracey & Morrow, 2017). Fosnot and Perry (2005) explained that constructivists view dialogue as

breeding further and deeper thinking. Although constructivism promotes the benefits of interacting with others, constructivists acknowledge that one version of reality is not the same as others (Fosnot & Perry, 2005). Although collaboration and interaction promote shared knowledge, the idea of shared knowledge does not denote having the same knowledge. Rather, each individual constructs their own knowledge based on their prior knowledge and social interactions with others (von Glasersfeld, 2005).

In addition to interaction, constructivists suggest that knowledge is adaptive and constructed through our actions and experiences (von Glasersfeld, 2005). In other words, constructivists believe we are not merely consuming our surroundings but rather interpreting the objects we encounter as well as their surrounding context through our senses and lived experiences. However, not all lived experiences promote intellectual growth. On one end of the experiential continuum are experiences that hinder intellectual growth and the other end greatly promotes intellectual growth (Dewey, 1938). Moreover, individuals interact with the world as they experience it. Thus, constructivist teachers offer experiences centered around active learning and leverage their classroom environment to do so. For example, Perkins (2009) describe learning environments as containing sources of information on a topic (e.g., textbooks, Internet-abled devices, reference sources), symbol pads (e.g., notebook, computer), objects for manipulation, areas to present phenomena (e.g., aquarium, terrarium), and tools to assist with completing tasks. Thus, constructivism invites teachers to use the resources at their disposal creatively to produce an active learning environment and embrace open-ended learning activities (Perkins, 2009).

Constructivists believe learning should be purposeful, and teachers should provide activities for the students to experience the learning rather than listening to lecture (Dewey, 1938). Thus, the role of the educator is to provide students with opportunities to grow and stimulate motivation to create their own knowledge rather than giving knowledge to students as passive learners (von Glasersfeld, 2005). Instruction should activate and build upon prior knowledge, challenge students to problem-solve in new ways often taking them out of their comfort zone, solicit feedback from peers and facilitators, promote reflection, and seek to activate intrinsic motivation as well as engagement (Baviskar et al., 2009). Specifically, constructivists value increasing student motivation by activating student interest and curiosity (Tracey & Morrow, 2017). Constructivist teaching is nonlinear in nature and is flexible to allow students to solve problems and welcoming errors as learning experiences (Fosnot & Perry, 2005). At the same time, learning takes place within the individual rather than through external forces or observable indicators (Tracey & Morrow, 2017).

Constructivist learning opportunities can be presented with or without direct instruction (Perkins, 2009). While direct instruction introduces students to a concept and the concepts presented are built upon through active learning, no direct instruction allows students to explain a given phenomenon through their own problem solving and information gathering techniques (Perkins, 2009). Furthermore, constructivist learning encourages self-organization, consideration of multiple perspectives, testing of multiple possibilities, illuminating contradictions and inconsistencies, and reflecting through journaling, discussion, or creating multimodal artifacts (Fosnot & Perry, 2005). For

example, Tracey and Morrow (2017) point out inquiry learning as an example of constructivist teaching. Inquiry learning allows students to interact within small groups, apply problem solving skills and strategies, test hypothesis, collect data, draw conclusions, apply appropriate thinking to a given situation, and reflecting (Tracey & Morrow, 2017). Further, learners should generate their own questions and hypothesis, discuss and rationalize their findings, and defend their choices. (Fosnot & Perry, 2005).

Focusing on bridging constructivism and instructional design, Bednar et al. (2009) asserted that effective instructional design is only possible if it is rooted in theory. They described the design process beginning with analyzing the context in which the learning opportunity will be implemented. For example, they suggested that although the learning opportunity may indicate a strand a of knowledge, constructivists believe that students should search for additional knowledge to solve a particular problem. Additionally, they explained students are encouraged to seek alternative points of view and consider multiple data sources. Thus, the students decided which knowledge is relevant to the task. Additionally, they suggested that learning opportunities must consider the knowledge, discourse, and dispositions of disciplinary experts. They described the need to analyze the learners' needs. They asserted that constructivists do not accept the concept of a global learner. Rather, constructivists focus on the students' development of awareness that is unique to their perspective. To specify learning objectives, constructivists promote the ways disciplinary insiders think and solve problems. Also, they explained that learning goals should center around a real-world task (e.g., teaching students how to think like a historian rather than teaching them a particular historical narrative). Additionally, they

stated constructivist instruction should be designed to promote a collaborative learning environment that allows students to engage with multiple perspectives on a given problem. Further examining the design process, they suggested evaluation for constructivist instruction considers the students' thinking process. For example, students must be able to offer perspective that is applicable in a given learning environment and that the student can defend his/her perspective.

This study examined the influence of a 9-week online professional development opportunity related to media literacy on high school teachers' pedagogy and perceived competency with the instructional integration of as well as their own media literacy. Constructivism is interwoven throughout the conceptual framework. For example, media literacy promotes critical thinking skills, constructivist learning, and problem-solving opportunities while incorporating the production and consumption of media messages (Hobbs, 2011; Redmond, 2013; Westbrook, 2011). Another component of the conceptual framework, disciplinary literacy accounts for the specific environment in which teachers' and students' knowledge was situated to consume and produce media. At the same time, constructivist pedagogy was applied to the online professional development opportunity. The online professional development provided opportunities for teachers to interact, collaborate, and actively engage with the professional development content through consuming and producing media messages as well as designing implementable content lessons. Therefore, constructivist principles were linked to the professional development opportunity and conceptual framework as well as provided a lens to analyze the data.

## **Definition of Terms**

*Disciplinary Literacy.* An instructional approach that considers the unique knowledge, abilities, tools, strategies of reasoning, texts, and discourses within each discipline (Goldman et al., 2016; Moje, 2015; Shanahan & Shanahan, 2012).

*Discourse.* The language practices used by a specific group of people to produce and communicate knowledge (Moje, 2015).

*Integrated Approach of Media Literacy.* Media literacy practices taught within the content area classroom rather than as a separate stand-alone course (Huguet et al., 2019).

*Media Literacy.* The ability to access, analyze, evaluate, create, and act using all forms of communication (National Association for Media Literacy Education, 2007, Basic Definition section).

*Online Professional Development.* Learning activities intended for the intellectual and/or pedagogical growth of practicing teachers offered through the Internet (Fishman, 2016).

*Verbal Protocol.* The verbal report of participants explaining their mental process during or after completing a task (Bainbridge & Sanderson, 2005).

## **Overview of the Study**

As scholars and practitioners search for effective instructional methods to integrate media literacy into the content classroom (Huguet et al., 2019), approaching media literacy instruction through a disciplinary lens accounts for the specialized knowledge, discourse, tools, texts, dispositions, and questioning techniques (Goldman et al., 2016; Moje, 2015; Rainey & Moje, 2012; Shanahan & Shanahan, 2012) needed to consume and produce media messages within content instruction. However, some

scholars and practitioners advise that media literacy should be taught only as a stand-alone course rather than within content area instruction. This perspective suggests that tasking each content area with the responsibility of teaching media literacy may be viewed as an additional burden to teachers, and media literacy education may not be valued to the extent of other curricular learning goals (Huguet et al., 2019). However, an integrated approach allows teachers to align their content instruction with authentic media literacy practices and teaches students relevant skills to access, analyze, evaluate, create, and publish media messages (Huguet et al., 2019).

While scholars have pointed to the connection between practices specific to content area instruction and digital literacy (Castek & Manderino, 2017, Goss et al., 2016), further examination of media evaluation and production techniques within each content area is necessary. However, before teachers can be expected to integrate media literacy into their content instruction, they must participate in effective professional development opportunities to promote curricular integration. Thus, teachers were taught media literacy concepts, connected media literacy to their specific content curriculum, and designed as well as implemented media literacy lessons through a 9-week professional development opportunity. The professional development included both synchronous and asynchronous learning sessions for interaction and differentiation, collaboration to brainstorm and create curricular resources, and application of teacher content and background knowledge specific to their content areas. Open office hours and individual meetings by the instructor were offered for optional instructional coaching opportunities. Also, a repository of resources including sample lesson plans,



supplemental readings, how-to documents for selected digital tools, and gamified online media literacy experiences for classroom implementation.

This study was designed as a case study incorporating multiple methods of data collection (Yin, 2018) and multiple case study analysis (Stake, 2006). Teacher learners engaged in interviews exploring their media literacy pedagogy, lesson design process, and the instructional integration of as well as their own media literacy. Throughout a 9-week professional development opportunity related to media literacy, teacher learners completed reflection activities both asynchronously and synchronously exploring their perceptions of how media literacy can be integrated into their content instruction. Also, two of the three design teams collaboratively created lessons for content instruction implementation. During modules 6 and 7 of the professional development, teacher learners completed a group verbal protocol within each design team while designing their media literacy lessons. Additionally, they participated in a second individual interview at the conclusion of the online professional development.

Although this study explored how teachers integrate media literacy into their instruction to address the specialized knowledge and discourses of their disciplines, the content in which teachers apply to design media literacy instruction, and their perceptions of their competency with the instructional integration of as well as their own media literacy, it is limited in that it does not collect student data. The media literacy practices taught in the online professional development have been recommended by scholars, but few studies examine the direct impact of media literacy on student learning. Future studies should explore the student application of media literacy strategies to determine

effective media literacy classroom practices. Secondly, future studies should examine the impact of professional development on teacher pedagogy and media literacy competency by employing experimental or quasi-experimental methods. Likewise, future research should explore the impact of media literacy professional development through longitudinal studies focused on long-term pedagogical change. Despite its limitations, this study addresses gaps in media literacy literature related to media literacy teaching methods.

The following chapters outline the details of this study. Chapter two reviews relevant selected literature supporting the conceptual framework of the study. Chapter three discusses the methods of this study including design, participant selection, data sources, data collection, and data analysis. Chapter four presents the findings from data analysis. Chapter five discusses the findings and provides recommendations and implications for teaching and research.

## Chapter Two

The definition of literacy is constantly changing as society progresses (Leu et al., 2013). As communication technologies continue to evolve in society, new literacies emerge related to ways of making meaning using these tools (Leu et al., 2004). Mills (2016) stated “...reading and writing practices using words-on-paper-based text formats are necessary, but not sufficient, for communicating across the multiple platforms of meaning making in society” (p. 25). Since digital tools afford multimodality, today’s definition of literacy must encompass encoding and decoding text beyond traditional reading and writing. For example, Hobbs (2017) defined literacy as “The sharing of meaning through symbols. Everyone – from all walks of life – needs to be able to create and share meaning through language, images, sounds and other media forms” (p. 5). Thus, children and adults alike need to develop competencies with these evolving literacies in order to be successful in the modern communication age.

Literacies that have emerged due to the evolution of information technology include “information literacy, media literacy, media education, visual literacy, news literacy, health media literacy, and digital literacy” (Hobbs, 2010, p. 17). Each of these terms belong to a particular paradigm, pedagogical approach, and lens used to create meaning within digital environments and from media messages. For example, although often mistakenly used interchangeably, digital literacy refers to the participation in digital environments while media literacy refers to the consumption of media messages in a variety of formats such as print, radio, television, and the Internet (Koltay, 2011). Though

all of these aspects of literacy are important, the focus of the current study is an integrated approach of media literacy. With popular culture's recent attention toward the proliferation of misleading information in online environments as well as the concern about students' inability to decipher online misinformation and disinformation (Wineburg et al., 2016), media literacy has emerged as a potential solution to equip Internet users with critical evaluation strategies.

While some scholars advocate for media literacy to be integrated within the content classroom rather than a stand-alone course, few studies explore how an integrated approach to media literacy looks in practice (Huguet et al., 2019). Disciplinary literacy practices offer an instructional approach to implementing media literacy into content classrooms. While disciplinary literacy accounts for the unique knowledge, abilities, tools, strategies of reasoning, texts, and discourses within each discipline (Goldman et al., 2016; Moje, 2015; Shanahan & Shanahan, 2012), disciplinary literacy scholars have also considered the instructional benefits of teaching specific evaluation strategies and incorporating media messages valued by each discipline (Castek & Manderino, 2017; Manderino & Castek, 2020). Although pedagogies for media evaluation and production in the disciplinary classroom have been introduced in the literature (Manderino & Castek, 2020), teachers must be taught these strategies and pedagogies in practice before classroom integration.

Since an integrated approach of media literacy is a new instructional approach for many teachers, they must learn necessary media literacy and pedagogical practices before implementing this approach into their classroom. With the increased access to digital

tools for both students and teachers as a result of the COVID-19 pandemic (Bushweller, 2020; Rauf, 2020), online professional development is one option for teaching educators about the instructional integration of media literacy and disciplinary literacy. When learning a new strategy, professional development allows for teachers to actively engage with the strategy, view models of effective instructional practice, and implement the new strategy into their instruction (Richards & Skolits, 2009). In this chapter, the literature relevant to media literacy will be reviewed. Then, the literature relevant to disciplinary literacy will be reviewed. Afterward, effective professional development practices including forming curriculum design teams within teacher professional development will be explored. Further, relevant selected literature related to media literacy across the content areas will be examined. The chapter concludes with a summary of the previous sections.

### **Conceptual Framework**

This study was informed by existing research and frameworks related to media literacy, disciplinary literacy, and teacher professional development, particularly online professional development. First, media literacy education promotes critical thinking skills, constructivist learning, and problem-solving opportunities while incorporating the production and consumption of media messages (Hobbs, 2011; Redmond, 2013; Westbrook, 2011). Next, disciplinary literacy allows educators to consider the instructional context and pedagogy in which content area teachers can implement media literacy. Finally, online professional development describes the format of the learning experience in which content teachers engaged. Online professional development offers

teachers an applicable, flexible, relevant, and collaborative learning experience to design instruction related to media literacy within a disciplinary context.

### ***Media Literacy***

Media literacy education promotes critical thinking skills, constructivist learning, and real-world problem-solving opportunities while incorporating the production and consumption of media messages (Hobbs, 2011; Redmond, 2013; Westbrook, 2011). A media literate person has the ability to “decode, evaluate, analyze, and produce both print and electronic media” (Aufderheide, 1993, p.9). Furthermore, Aufderheide (1993) described media literacy as “hands-on, experiential, and democratic” (p.10). Structured around these guidelines, media literacy education has the potential to promote student-centeredness, inquiry-based instruction, and discovery learning (Hobbs, 2006). Media literacy aims to bring awareness that media messages are constructed, construct reality, and have commercial, ideological, and political implications (Aufderheide, 1993; Hobbs, 2007). Thus, media literacy outlines cognitive tools and instructional approaches for evaluating media messages both inside and outside of school.

The communications process underlies media literacy. Silverblatt (2014) described a model of communication consisting of the deliverer of the message, the information presented, vehicle that delivers the information, and receiver of the message. He continued to explain the model of digital communication differs because Internet users can publish their work online without the help of an established media organization. Thus, in the digital communication model, the audience can also be the consumer and creator of media messages simultaneously. Similarly, Hobbs (2020) discussed how

sophisticated algorithms within web sites and social media aimed at providing a personalized experience to Internet users makes media literacy education difficult for teachers because each user has a different Internet experience. Therefore, media literacy has progressed alongside evolving communication technology. Further, media literacy provides a lens to examine teachers' competency and pedagogy related to providing relevant instruction empowering their students to critically evaluate the information they receive online as well as produce and distribute their own media messages.

Traditionally, media literacy has been split into the protectionist and empowerment paradigms. While the protectionist perspective believes children should be shielded from harmful media content, the empowerment prospective promotes critical thinking about media messages to participate in our democracy, economy, and cultures (RobbGrieco, 2014). However, with the proliferation of Internet-abled devices, many scholars now view the protectionist and empowerment paradigms as complimentary (Hobbs, 2010). While media literacy can be traced back to as early as the 5<sup>th</sup> century B.C related to the study of rhetoric, critical thinking skills, and teaching of politics (Hobbs & Jensen, 2009), media literacy has and will continue to progress with advancing technology that impacts communication and social practices.

The evolution of media literacy can be traced to mass communication through print, radio, television, and the Internet. For example, Hobbs and McGee (2014) applied media literacy to teaching evaluation of propaganda in a university course. They pointed to the need for critical evaluation skills in the 1930's. They cited the panic caused by the Orson Welles radio broadcast "War of the Worlds." Furthermore, they defined

propaganda as “the intentional sharing of facts, opinions, and ideas designed to change behavior or motivate action” (p. 57). Thus, this definition of propaganda directly relates to the consumption of Internet information today where users must evaluate a constant stream of information to decipher fact from fiction. Although variations of media literacy can be seen throughout history, this paper primarily focuses on media literacy from the protectionist and empowerment perspectives beginning in the 1960’s moving toward evaluating online information present day.

Although several debates exist related to the definition of media literacy, its role in society, and how it should be taught, Potter (2013) points out seven common themes agreed upon by scholars. Focusing on mass media, Potter’s (2013) themes include:

- The mass media have the potential to exert a wide range of effects on individuals
- The mass media exert an influence not just on individuals but also on larger social structures
- There is an assumption that because media influence is constant and subtle that people are more susceptible to that influence when they are passive
- The purpose of media literacy is not just to help people to protect themselves from the potentially negative effects but also to empower them to use the media as a tool to achieve their own goals
- Media literacy must be developed
- Media literacy is multi-dimensional

While Potter’s (2013) themes focus on mass media, media literacy in today’s society must account for the impact of social media on Internet users’ media consumption



and production practices. Social media affords the ability to consume and share content created by other social media users as well as reputable news sources. The rise of fake news through social media platforms heightens the need for Internet users of all ages to become media literate. Ireland (2018) defined fake news as “pieces that ignore, twist/misrepresent, or invent facts” (p. 123) and can also include biased information, satire, and parody. Fake news can be spread through online environments such as social media, blogs, wikis, and other web sites (Korona, 2020). Furthermore, fake news typically contains visceral, poignant language often painting a negative picture of an opposing ideology (Brummett et al., 2018) and can advocate for the mistrust of mainstream media outlets. Associated with negative, emotional language spread through social media platforms, Alvermann (2017) warned that Internet users must be cognizant of the dangers of accepting emotional appeals in place of facts and surrounding themselves with only likeminded people without considering other viewpoints. Likewise, Brummett et al. (2018) explained that social media communities are typically comprised of people who share the same ideology or political affiliation causing information shared through social media to travel through echo chambers. Relatedly, Fisch (2018) suggested that these echo chambers of information lend themselves to confirmation bias, which she defined as “...the idea that we are all more likely to believe those stories that confirm our existing beliefs” (p. 106). Relatedly, Internet hoaxes are now predominant in popular culture to the point where CNN named 2013 “The Year of the Online Hoax” (Hobbs & McGee, 2014). At the same time, false information and hoaxes spread throughout the Internet because users do not verify the credibility or accuracy of the media message, or

they spread misinformation purposefully (Syam & Nurrahmi, 2020). Thus, an integrated approach to media literacy education must not only invite students to evaluate media messages themselves but also consider their own Internet practices and how their beliefs and backgrounds influence how they interpret and share media messages.

Wineburg et al. (2016) explored middle, high school, and college students' ability to decipher online misinformation. They described their findings as “bleak” as students across grade levels struggled mightily to determine the veracity of online content. They found that students often ignore the sources of images associated with online information and are fooled by information presented through social media. To remedy this issue, Wineburg and McGrew (2017) suggested that teachers implement strategies used by professional fact checkers, namely “lateral reading.” Rather than inviting students to analyze the information on the web site, lateral reading asks students to open a tab along the horizontal access of their web browser and compare information located on the web. Lateral reading has been promoted by digital citizenship curriculum providers such as Common Sense Education for practitioners to implement within their classrooms.

Policymakers, practitioners, and scholars have focused their efforts to bring media literacy into the classroom. As of 2021, fourteen states in the United States have created and implemented curriculum policies related to media literacy education aimed at combatting online misinformation through classroom instruction (Media Literacy Now, 2022). For example, Colorado legislators passed a bill on June 3, 2019 urging their Department of Education to create a K-12 media literacy curriculum that will incorporate media evaluation topics including deciphering fake news, bias, and misinformation

(Media Literacy Now, 2019). Further, since effective research instruments that clearly measure media literacy are lacking, scholars have called for media literacy standards (Huguet et al., 2019). Thus, school district stakeholders and scholars have recognized the need for media literacy in K-12 education but still seek effective media literacy education practices in the classroom.

Although Hobbs (2010) asserted that empowerment and protectionist perspectives of media literacy education were complimentary rather than opposing, some scholars and practitioners prescribe to one approach over another. For example, scholars who advocate for protectionism promote shielding children from harmful media content. Conversely, scholars who advocate for empowerment promote critical thinking about media messages in order to participate in our democracy, economy, and cultures (RobbGrieco, 2014). However, scholars have agreed that media is influential and impacts consumers. Thus, media literacy is not an innate skill but rather must be taught to decipher the impact and credibility of media messages. While school district stakeholders have implied media literacy is a valuable instructional tool, a consensus of best practices have not been reached. Thus, today's debates surrounding media literacy are not necessary "if" questions but rather "how," such as how should media literacy be taught in K-12 settings. Related to the debate around empowerment and protectionist perspectives, perhaps, an answer for school district stakeholders is a combination of both empowerment and protectionist approaches, as advocated by Hobbs (2010).

**Competencies and Standards Related to Media Literacy.** One of the earliest definitions of media literacy came from the Aspen Institute's National Leadership

Conference on Media Literacy. It defined media literacy as the ability to “decode, evaluate, analyze, and produce both print and electronic media” (Aufderheide, 1993, p. 9). Similarly, The National Association of Media Literacy Education (2007) lists Core Principles of Media Literacy Education including:

- Requiring active inquiry and critical thinking about the message we receive and create
- Expanding the concept of literacy to include all forms of media
- Building and reinforcing skills for learners of all ages
- Developing informed, reflective, and engaged participants essential for a democratic society
- Recognizing that media are a part of culture and function as agents of socialization
- Affirming that people use their individual skills, beliefs, and experiences to construct their own meanings from media messages

Thus, the National Association for Media Literacy Education’s Core Principles reflect media literacy as more than a set of skills, but rather, a worldview or pedagogical approach. Related to media literacy in practice, the RAND Corporation (Huguet et al., 2019) listed seven competencies aimed at applying media literacy to evaluating online information. These competencies include:

- Recognize the demand for and be able to search for, access, and retrieve information and media content

- Use evidence to investigate questions; devise and implement a plan to fill knowledge gaps
- Analyze information from multiple sources and identify complexities, discrepancies, and different perspectives
- Evaluate characteristics of information products that indicate the underlying creation processes
- Trace and evaluate an argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims
- Students create original works or responsibly repurpose or remix digital resources into new creations
- Communicate discoveries in ways that suit the purpose and audience

Both the Core Principles (National Association for Media Literacy Education, 2007) and Competencies (Huguet et al., 2019) focus on the evaluation and creation of media messages. Also, both promote critical thinking skills. While the National Association for Media Literacy Education's Core Principles situate media literacy within a broader society and demonstrate how media messages reflect and shape reality, the RAND Corporation's competencies focus more on the text itself without considering its broader impact. However, the RAND Corporation's competencies ask the user to look across Internet sources to determine credibility. This places a greater emphasis on evaluating across online texts rather than one-way mass communication devices such as print, radio, and television. Thus, both Core Principles and Competencies offer

complimentary views on media literacy education and both are necessary to promote media literacy in today's evolving media landscape.

**Critical Media Literacy.** Critical media literacy accounts for the relationship between media messages and audience interpretation, challenges the cultural norms perpetuated by the media, confronts injustice by attending to power structures within media messages, and empowers students to explore their individuality by creating counternarratives that respond to prejudices within media messages (Alvermann & Hagood, 2000; Funk et al., 2016; Garcia et al., 2013). Since media messages are constructed and construct reality (Center for Media Literacy, 2005), critical media literacy illuminates the context surrounding media messages as well as the media's impact on society and culture. Through critical media literacy pedagogy, students are empowered to reflect about the role of media messages in their lives but are also invited to push back against dominant narratives presented in the media and the classroom through media evaluation and production (Alvermann & Hagood, 2000; Funk et al., 2016; Garcia et al., 2013). The following studies are presented to demonstrate and discuss media literacy pedagogy through a critical lens. A review of the literature revealed that incorporating critical media literacy pedagogy empowers students to explore their identity and respond to aspects of their identity that have been negatively portrayed within the media (Garcia et al., 2013), bridge theory and classroom practice (Joanou, 2017), consider reactions from students from different cultural backgrounds to media messages (Gainer, 2010), improve critical reading skills (Kelley & Browner, 2016), and

deconstruct and respond to political representations sent through social media (Elmore & Coleman, 2019).

Critical media literacy has been presented as a framework for teachers to bridge media literacy and social justice practices. Alvermann and Hagood (2000) defined critical media literacy as interpreting print and non-print texts, accounting for the relationship between media messages and audience, and considering multiple viewpoints presented through media messages. They reviewed relevant selected literature related to critical media literacy and explained that individuals from different demographics often interpret media messages differently depending on their ethnic and cultural background. Therefore, their interpretations do not mirror the media message but rather individuals construct their own meanings. They outlined critical questions to consider when engaging with media messages including who does the text address through its multimodality, whose voice is omitted, why was this particular individual or group's voice omitted, who benefits from this message, and how does the author position the reader within the text. Further, they explored how critical media literacy can be integrated within content instruction. They pointed out the need for teachers to incorporate out-of-school literacies into the content curriculum to challenge the prescribed learning goals often reflecting a top-down, hegemonic school culture as well as allow students to explore their own individual perspectives. They invited teachers to create opportunities for students to consider perspectives outside of their own race, class, and gender as well as reflect about their own bias. Thus, they seek to bridge in-school and out-of-school literacies for students to understand their own perspective, push back against and question dominant

texts, explore their own individuality through media creation and evaluation, and gain a greater understanding of their role with media messages as a targeted audience member.

Building upon the definition of critical media literacy set forth by Alvermann and Hagood (2000), Funk et al. (2016) explained that critical media literacy is a pedagogy that promotes democracy, civic engagement, and illuminates social issues including those related to race, gender, and class perpetuated by the media. Further, they asserted that critical media literacy empowers teachers and students to apply critical thinking skills to the information presented society and confront injustice. They point to the importance of teachers incorporating media production as well as account for the context of a message when consuming media. Production allows for students to express themselves, talk back to media, and promote awareness of inequality or other problems within society. Also, considering the context of the media message allows the consumer to reflect about the message's political, ideological, and societal implications. They urge audiences to apply critical thinking skills to determine the context of the media message because values, beliefs, and prior knowledge will affect how the message is interpreted. Audiences must consider the biases of those who constructed the message. Therefore, critical media literacy attends to the relationship between "audiences, information, entertainment, power, and ideology" (p. 4). They assert that media shapes society and reality, and all media contains some form of bias. Also, through critical media literacy, audiences can question who created the message as well as the format in which it was constructed, how different perspectives could interpret the message, whose culture, politics, ideology, and background is being presented, the reason the message was created, and who benefits



from the message as well as who is at a disadvantage because of it. Additionally, critical media literacy questions the definition of normal. The authors explained that *normal* is a social construction, often reflecting the dominant culture. Media messages that only portray what is considered normal oppresses voices outside of the status quo as audiences construct knowledge based on the information they encounter through media messages. They urge educators to transform their pedagogy by incorporating critical media literacy into their content lessons, such as media production to empower students to bring awareness to social issues and media evaluation to debunk stereotypes, illuminate inequalities, and attune to the bias in media messages.

Critical media literacy can be impactful for both K12 students as well as students in higher education. Focusing on classroom examples of critical media literacy, Garcia et al. (2013) described critical media literacy as a framework aimed at guiding audiences to attend to power structures within media messages. They provided classroom examples from high school and preservice teachers who integrated critical media literacy into their instruction. For example, they described an assignment within an AP English class surrounding media misinformation and disinformation. Students were grouped in pairs and assigned a chapter from *unSpun: Finding facts in a world of disinformation*. After reading their assigned chapter, students selected an online image that representing the information from the chapter. Then, students analyzed each of their classmates' images, evaluated the credibility of their classmates' examples, and created a Prezi to present their conclusions. Likewise, they described two assignments from a preservice teacher course focusing on critical media literacy. Their examples included creating a Wanted

Poster and the Through Each Other's Eyes assignment. The Wanted Poster assignment was intended to empower preservice teachers to challenge the narratives presented in schools as well as learn the functionality of digital tools. For example, social studies teachers could select a photo of an historical figure and add text to the photograph depicting how different perspectives may interpret that historical figure's accomplishments positively or negatively. In the Through Each Other's Eyes assignment, preservice teachers used Voicethread to present an image that represented an aspect of their identity. Then, they added audio to explain how the media has presented this aspect of their identity negatively. As the semester progressed, preservice teachers delved deeper into constructing and deconstructing media representations. They explained that assignments that incorporate critical media literacy intend to bring awareness about how the dominant culture controls narratives in both media and in the classroom. Critical media literacy empowers students to approach these narratives from critical lens to push back on media messages that both reflect and construct power in society. Further, critical media literacy allows students create a more informed, improved, and empathetic society by having a discourse with media messages while using relevant digital tools.

Focusing on secondary education, Gainer (2010) explored the multimodal literacy practices of middle school students who were participating in an after-school club related to critical media literacy. During club meetings, participants deconstructed media messages, created their own multimedia compositions, and learned the functionality of media creation tools. The club especially focused on the deconstruction of media messages representing urban students. For example, the author presented two students'

reactions to a viewing of the film *Dangerous Minds*. He discusses the contrasting perspectives from the Caucasian and Latino student as the Caucasian student saw *Dangerous Minds* as a film about a teacher whose race was irrelevant to the story. Conversely, the Latino student saw the film's storyline as only considered relevant enough to be made into a film because the teacher was white. The student also asserted that the film incorrectly generalized Latino students as loud and hard to reach in the classroom. Thus, the author presented the discussion surrounding *Dangerous Minds* to illustrate how cultural groups may interpret media messages differently as well as the need for students to discuss media representations to develop counternarratives that bring awareness to voices that might be omitted from the media text.

Likewise, Elmore and Coleman (2019) described an action research study focusing on promoting critical media literacy through the analysis of political memes in an eighth-grade English classroom. They explored how the analysis of political memes impacted students learning critical media literacy skills. One teacher and fifty-six students participated in the study. To design the study, the teacher began by planning the instruction related to critical media literacy to include media sources, vocabulary words, discussion questions, activities, and manipulatives. Then, the teacher developed a two-week unit focusing on critical media literacy that required students to gather authentic media, apply vocabulary words to critically read media messages and perform rhetorical analysis, and use a graphic organizer to record their media analysis. During the two-week unit, the teacher first introduced the vocabulary words relating to critical media literacy and rhetorical analysis. The next day, students analyzed a political speech applying the

vocabulary words. Further, students were asked to reflect about the speaker's motives. Next, the teacher discussed terms related to critical media literacy and assigned readings related to the real-world application of media literacy. Afterwards, the teacher discussed memes with the class, and students researched the background of memes. Building upon their meme research, students were instructed to find and email a meme to the teacher. From the student emails, the teacher selected 5 memes for the students to analyze. The memes were printed on large paper and posted on the classroom walls for students to discuss. Finally, students applied critical media literacy by selecting one of the five posted memes and analyzed the meme's potential motives and intended audience. Findings indicated that students articulated that some of the presented memes promoted hostility between religious and ethnic groups. Also, students indicated memes reflect identity and often aim to appeal to certain political and ideological audiences. They discussed that the presented political memes are a form of propaganda often leading to animosity between cultural groups. At the same time, students attended to how the visual arrangement of the meme affected the message it was conveying. Thus, the authors presented a classroom lesson incorporating critical media literacy that empowered students to analyze political memes beyond surface-level meaning and consider how the meme reflects the world and creates perceptions of society.

Focusing on teacher education, through an action research study, Joanou (2017) explored how critical media literacy can bridge theory and practice for K12 educators participating in a graduate level course. The graduate course presented numerous critical theories related to teaching and education and allowed teacher learners to reflect about

how the connection between race, class, gender, sexuality, and perpetuation of injustices in education influences classroom practices. Eleven teacher learners engaged in discussion, created media artifacts, and led a critical discussion about a selected media source. Three themes surfaced from emergent coding of the data including illustration, critical engagement, and call to action. Illustration suggested that teacher learners were able to represent critical theories through visuals but may or may not have been able to explain the theory through a critical lens. Critical engagement with media illustrated that teachers could clearly articulate a deep and critical understanding of the theory and were able to apply the selected critical theory to their classroom practice. Call to action outlined methods for teachers to promote socially-just educational practices and challenge social injustices. They concluded by urging teachers to integrate critical media literacy into their classroom instruction for students to engage in critical reflection about media messages, become aware that minority groups are often portrayed negatively in the media, and construct and deconstruct media messages as a form of advocacy.

Similarly, Kelley and Brower (2016) examined the influence of critical media literacy on college students academic reading skills. They explained that developing counternarratives to academic text requires deep reading and critical thinking skills that will help students increase their reading level. Students were provided with scaffolding resources including a prereading survey to explore their own beliefs and biases as well as supplemental media to further elaborate on key concepts. Students were asked to make connections to the text including text-to-self, text-to-text, and text-to-world. Text-to-self connections allowed students to consider how the text reflects their own lived

experiences as well as how the text might depict their ethnic or cultural group incorrectly. Text-to-text allowed students to make connections between the presented text as well as texts that have previously encountered. Text-to-world allowed students to consider how media messages represent race and class as well as how media messages impact media consumers' perception of the society. The authors concluded by advocating for critical media literacy practices across literacy classrooms to promote reading and writing skills as well as empower students to deconstruct the messages they receive in their lives.

While media literacy outlines the skills, strategies, and dispositions students need to evaluate and produce media messages, critical media literacy considers the element of context. Since all media messages contain bias, critical media literacy is necessary to consider whose voice is presented and whose is omitted (Alvermann & Hagood, 2000; Gainer, 2010). At the same time, critical media literacy empowers students to question the representations of culture portrayed by the media and respond to those representations (Alvermann & Hagood, 2000; Garcia et al., 2013). Thus, production is an essential aspect of critical media literacy that empowers students to explore their identity (Elmore & Coleman, 2019; Garcia et al., 2013), advocate for social change, and attend to stereotypes, inequalities, and bias (Funk et al., 2016).

**New Media Literacy.** Internet-abled handheld devices, such as Smartphones and tablets, allow for instant access to information. However, these devices have the capability of sending notifications containing information from organizations in which users have subscribed or agreed to receive notifications. Thus, students are often bombarded with notifications from their Smartphones even when they did not search the

Internet to locate information (LaGarde & Hudgins, 2018). Likewise, Internet-enabled devices provide evolving affordances to consume and produce media messages. Related to media literacy, new media literacy refers to the consuming and prosuming (consuming media for the purpose of producing a media message as well as the production and publication process) of media messages in Web 2.0 environments (Chen et al., 2011; Lin et al., 2013). The following studies are presented to demonstrate the evolution of the framework of new media literacy as well as the instructional affordances of new media literacy. A review of the literature revealed new media literacy builds upon the traditional media literacy practices but differentiates between functional and critical skills within Web 2.0 environments. Further, elements of new media literacy promotes communication skills and democratic involvement within collaborative online environments (Tugtekin & Koc, 2020).

Chen et al. (2011) presented a framework for new media literacy. They defined new media literacy as “a convergence of all literacy developed over the past centuries including classic literacy, audiovisual literacy, digital literacy, and information literacy” (p. 85). They explained that new media affords both technical and sociocultural characteristics. For example, they described hashtags within social media that allows Internet users to automate searching for particular online media. Further, they described the sociocultural characteristics of new media as allowing users to create media messages, understanding the ideology and values behind media messages, and leveraging media to serve social, political, and commercial purposes. Guided by these technical and sociocultural characteristics, they introduced a framework for new media literacy. The

framework for new media literacy was presented as a continuum of consuming and prosuming on the horizontal axis and functional and critical on the vertical axis. They defined functional consuming media literacy as understanding literal interpretations of media messages. Critical consuming media literacy invites the media consumer to analyze, evaluate, critique, and synthesize media messages for its societal impact. Likewise, Functional prosuming refers to the ability to create media content. Further, Critical prosuming refers to creating media content to impact society.

Expanding on the framework of new media literacy, Lin et al. (2013) introduced the refined framework of new media literacy. They further developed Chen et al.'s (2011) new media literacy framework by offering concrete definitions and vocabulary for consuming and prosuming practices. They also differentiated between Web 1.0 and Web 2.0 practices in the refined model. Within functional consuming, they identified consuming skill and understanding as subcategories. They described consuming skill as the technical skills needed to consume media. Relatedly, understanding refers to comprehending the literal meaning of media messages. Within critical consuming, they identified analysis, synthesis, and evaluation as subcategories. Analysis is the deconstruction of media messages to understand how they were constructed. Synthesis refers to the reconstruction of media messages including remixing the author's perspective with previous media messages. Evaluation is determining the veracity of media messages. Within functional prosuming, they identified production, distribution, and prosuming skill as subcategories. Production refers to the application of techniques to create media messages. Distribution is the creator's ability to publish messages to a



specific audience. Prosuming skill is the technical skills needed to create media. Within critical prosuming, they identified creation and participation as subcategories. Create refers to the construction of media messages to influence society. Finally, participation refers to interacting with media and reaction to media through online environments such as social media.

Furthermore, Tugtekin and Koc (2020) applied the refined framework of new media literacy through correlational survey research to explore the relationships between the categories of new media literacy, communication skills, and democratic tendency. Their findings indicated that functional consuming and functional prosuming positively affected critical consuming, critical prosuming, and communication skills. They explained functional consuming and function prosuming affords social interaction within Web 2.0 environments to promote communication skills. Also, they acknowledged that critical thinking skills are formed and refined through the evaluation of online media messages and encountering online misinformation. Critical consuming positively influenced critical prosuming and democratic tendency. They explained new media promotes political participation through its social and information sharing affordances. Communication skills predicted critical consuming and democratic tendency. They explained that those who communicate with others often apply critical thinking skills to participate in discourse on social and political issues. Further, they suggested communication skills affords participation in democratic discourse through new media. They conclude by suggesting further media literacy curriculums should account for

evolving digital tools as well as their affordances for social practices including how Internet users can create and disseminate their own media content.

New media literacy expands upon the foundational elements of media literacy by outlining the skills and strategies Internet users apply when engaging with online information in Web 2.0 environments. Specifically, the refined framework of new media literacy (Lin et al., 2013) displayed specific functional and critical approaches to consume and prosume online information. Since the vast majority of Americans of all ages receive news and information from the Internet compared to radio, television, or print (Shearer, 2021), media literacy education opportunities must consider the specific approaches to accessing, analyzing, evaluating, creating, and publishing information on the Internet and how Web 2.0 environments differ from other forms of media. Thus, the online professional development in this study incorporated information related to new media literacy in addition to media literacy.

**Teacher Perceptions of Media Literacy Education.** The instructional application of media literacy education differs depending on the teacher's perception of how it relates to their content area. For example, Huguet et al. (2019) identified three perspectives surrounding media literacy education including economic drivers, civic life and democracy, and quality of information. Teachers who design instruction related to media literacy education must consider how evaluating media and media production align with their content objectives. The following studies are presented to demonstrate the influence of teachers' perceptions of media literacy education as it relates to their instruction. A review of the literature revealed teachers in different content areas valued

different aspects of media literacy (Hobbs & Tuzel, 2017), teachers believe students are most competent with accessing media and least competent with analyzing media messages (Schmidt, 2013), and teachers' cultural background (Hobbs et al., 2018) and content area learning goals (Cherner & Curry, 2019; McClune & Alexander, 2015) impacts their pedagogy related to media literacy education.

In a descriptive case study exploring the digital learning motivations for Turkish educators of language arts, social science, and information technology, Hobbs and Tuzel (2017) created digital learning profiles from survey data. Findings indicated a significant relationship between teachers' subject area specialization and digital learning profiles. For example, the majority of language arts teachers' profiles were Demystifiers (helping students develop critical thinking skills by deconstructing media messages) and Tastemakers (helping students appreciate culturally important media). Social studies teachers were predominantly Activists (helping students address real world issues through civic engagement with media and technology) and Demystifiers. Finally, information technology teachers were Techies (propensity to engage students in authentic problems through digital media and tools) and Alts (challenges students to find new innovative ways to find, use, reflect about, and create media messages). Thus, the digital learning profiles suggested that teachers value and approach media literacy strategies differently depending upon their content area.

Similarly, Schmidt (2013) conducted a survey study to explore media literacy education from kindergarten to college. Elementary, middle, high school, and college faculty working within one county participated in the 56-item survey aimed at studying

their perceptions of the integration of media literacy education. The survey was divided into three sections including faculty perceptions of the level at which their students are media literate, the extent in which they implement media literacy strategies into their instruction, and the importance they place on incorporating topics related to media literacy into their instruction. Each category incorporated “media access, analysis and evaluation, and mediated message communication dimensions of media literacy which are identified in the definition [of media literacy] established by the National Association for Media Literacy Education (2007)” (p. 297). Results indicated educators perceive students are generally media literate; however, they believe students are most competent with accessing media and least competent with analyzing media messages. Further, faculty across education level acknowledged they address media literacy education in their classrooms. However, age and years of teaching influenced the extent in which faculty incorporated media literacy. Four-year university teachers indicated they incorporated more media literacy education into their coursework compared to other educational levels. Finally, while participants reported overwhelming importance for incorporating media literacy into their instruction across educational levels, they rated it most important to teach students to analyze media messages.

Further, Cherner and Curry (2019) explored pre-service teachers’ pedagogical choices when designing lessons related to media literacy. Pre-service teachers were required to align an academic standard of their choice to one of the National Association for Media Literacy Education’s Core Competencies. Findings indicated most pre-service teachers selected core competencies that promoted critical analysis of media messages

and reinforced media as both cultural tool and artifact. Pre-service teachers selected diverse media formats dependent on the content objective. The type of media the pre-service teachers selected included digital articles, advertisements, and websites. They implemented digital articles to explore bias, perspectives, and/or microaggression. Websites were implemented in a similar way; however, participants invited students to look across articles to explore local issues. Advertisements included commercials, sales announcements, or marketing materials and were implemented to identify persuasive techniques. Therefore, pre-service teachers selected specific media aligning with content area objectives.

The application of media literacy strategies is not only impacted by content area and media format but also the cultural background of the teacher and students as well. Hobbs et al. (2018) described the design and implementation of a virtual exchange learning experience in two undergraduate courses related to media literacy.

Undergraduate education and communication studies students in the United States and Germany collaborated on five learning experiences related to fake news and propaganda and aligned with the fundamental competencies of media literacy including access, analysis, evaluation, creation, reflection, and action. German and American students applied their knowledge of propaganda, their cultural background, and academic background knowledge to evaluate and create media messages. As students engaged in discussion, they found both groups interpreted messages differently citing gaps in cultural context. For example, media messages that made references to specific events in American and German culture were often not identified to the other cultural group. Prior

knowledge and historical background knowledge impacted the evaluation and creation of media messages.

Furthering the notion that background knowledge and content area impacts the interpretation of media messages, McClune and Alexander (2015) reported on Getting Newswise, a teacher learning initiative aimed at embedding strategies related to media literacy within the science curriculum. The study was conducted in two phases. During the first phase, teachers of English and science were provided a science-related news article and asked to critically read the article to provide a comment that stimulated a response within the reader. During phase two, teachers identified strategies and pedagogical approaches including lesson planning, classroom strategies, and professional discourse to create cross-disciplinary connections. Findings suggested English and science teachers approached evaluation of science-related media through different but complimentary lenses. For example, science teachers value the accuracy of headlines, scientific context of the story, credibility of the author, links between the conclusion and supporting evidence, and attends to the scientific knowledge presented in the media message. Conversely, English teachers value the word choice aimed to influence the reader, struggle with technical scientific vocabulary, prefer the word of a first-hand witness, and distinguish between fact and opinion.

**Media Literacy Classroom Practices.** Several studies have explored classroom practices related to media literacy through frameworks, checklists, web literacy, and technology integration. The following studies are presented to describe current literature examining teacher pedagogy and media literacy. A review of the literature suggested

content area teachers often approach media literacy as a learning goal rather than integrated within larger curriculum objectives. Also, the literature revealed frameworks and checklists have some instructional value but do not give students approaches that encompass all of the strategies needed to effectively evaluate media messages. This aligns with the assertion made by Breakstone et al. (2018) that checklists are often ineffective determine the credibility of online information. However, the literature revealed effective pedagogy related to media literacy include modeling with online mentor texts (Pilgrim et al., 2019), linking media literacy to content area objectives (Comber & Grant, 2018), and incorporating constructivist teaching methods and purposeful technology to promote media consumption and production (Redmond, 2013).

The WWWDOT framework encourages students to consider six criteria when evaluating web sites including “who wrote it, why it was written, when it was written, does it help meet my needs, organization of the site, and to-do list for the future” (Zhang & Duke, 2011; Zhang et al., 2011). During an experimental design study, fourth and fifth grade students from rural, suburban, and urban schools engaged with the WWWDOT Framework to test its impact on their ability to evaluate online information (Zhang & Duke, 2011). Students were taught four 30-minute lessons including the impact of publishing online, explicit instruction of the WWWDOT framework, importance of measuring the trustworthiness of web sites, and finishing the WWWDOT worksheets then holding a classroom debate about the web site trustworthiness. Students who participated in the WWWDOT framework lessons had improved critical online evaluation skills compared to the control group, and they demonstrated their

understanding that not all online information is trustworthy. However, students were unable to consistently articulate the trustworthy and untrustworthy aspects of web sites (Zhang & Duke, 2011).

Similarly, the CRAAP test offers a list of questions aimed at assisting students with determining whether information is trustworthy (Blakeslee, 2004). Its components include currency (timeliness), relevance (importance of the information to meet your needs), authority (source of the information), accuracy (reliability, truthfulness), and purpose (reason it exists; Meriam Library, n.d.). Herrero-Diz et al. (2019) explored whether university students respond to news stories differently depending on the media. Using the CRAAP test, they asked students to evaluate the same news topic published in different media. For example, one source was a well-known news agency, another was a digital newspaper, and the other was a fictional satirical news site (e.g., The Onion). Student responses varied depending on the CRAAP category, media, and gender of the participant. Since responses were so diverse, they called for more teacher education opportunities in information literacy.

The CRAAP test has been adopted by numerous K-12 and higher education librarians as an instructional aide to teach students strategies to evaluate information. For example, Lewis (2018) described a classroom lesson where an undergraduate science writing course evaluated a blog entry using the CRAAP test. She explained that although students successfully evaluated the blog using the framework, they were confused about what year indicated current versus outdated information. Further, students assumed the blog post was intended for scholarly audiences. Also, students were confused when they



could not find the author and did not understand where to find whether an article has been peer-reviewed. Finally, students expressed the article contained bias; however, they could not articulate their evidence or reasoning behind this assertion.

Pilgrim et al. (2019) conducted one-on-one interviews with 68 students in grades one through five. During the interviews, students were asked to evaluate the hoax web site The Northwest Tree Octopus (<https://zapatopi.net/treeoctopus/>) for reliability. Although the web site does not contain factual information, the majority of students across grade levels thought the information was trustworthy. Students compared the information on the web site to their prior knowledge. Also, they used the text features, such as photos and graphics, to look for clues about the web site's accuracy. Although many students in grades one through four accepted the factual statements on the web site as truth, students in grade five suggested checking the accuracy of facts through informal research, such as lateral reading. They explained that teachers should show students online mentor texts and model evaluation strategies through direct instruction. Further, they suggested teachers conduct classroom discussions about deciphering the credibility of online text and offer strategies and scaffolding for students to evaluate online information.

Another example of a classroom-based study, Comber and Grant (2018) described the design and implementation of a media literacy unit of study for elementary and middle school. They began designing their unit of study by linking media literacy to already established curricular objectives. They described a lesson where students viewed the Fake News episode of *Behind the News* and wrote unfamiliar words and phrases,

such as rumor mill, extreme bias, and a little too crazy to be true. Then, the class viewed a PowerPoint containing images of world leaders, authorized images, and popular images that were a target for commentary. Other activities related to media literacy included evaluating online images including political cartoons and engaging with misinformation and disinformation to become critical consumers of media. They suggested that students work with multiple authentic texts to understand how information is presented in multimodal texts and how texts function in society. As a result of the unit of study, the authors noted students incorporated “texts found in everyday life in their communities, making the corpus of material open, dynamic, and multilingual” (p. 332) into classroom discussion.

Focusing on classroom technology integration and media literacy, Redmond (2013) reported her case study research investigating the integration of specific media and technology in a seventh-grade media literacy class. The selected participants taught or were enrolled in the only media literacy class, named Media Literacy Workshop, taught at a public school in the selected region. Data collected included field observations concerning lesson structure, media and technology used, activities, assessments, teacher/student comments, reflective notes, and teaching practices. Furthermore, interviews were conducted with Media Literacy Workshop teachers to collect biographical data, teaching philosophy, and pedagogy with the integration of media and technology. The Media Literacy Workshop curriculum and student produced artifacts were collected as well. Findings indicated that media and technology were implemented through constructivist teaching methods including critical evaluation of media messages

and purposeful use of digital tools. However, participants implied curricular demands, state standards, and district initiatives hindered the effective implementation of media literacy education because these stakeholders focused primarily on merely acquiring new technology without the properly equipping students with necessary skills to be effective future-ready citizens.

### ***Disciplinary Literacy***

Disciplinary literacy offers an instructional approach that incorporates “the specialized knowledge and abilities possessed by those who create, communicate, and use knowledge within each of the disciplines” (Shanahan & Shanahan, 2012, p. 7). Teachers who practice disciplinary literacy enculturate students into the ways disciplinary experts read, write, and think within a given field (Moje, 2015; Rainey & Moje, 2012). Within each specific discipline, texts are interpreted and created for particular purposes, for specific audiences, and with specific needs and goals in mind to solve disciplinary issues (Moje, 2015; Rainey & Moje, 2012). Likewise, disciplinary literacy promotes accounting for the discourses and linguistic differences such as technical vocabulary specific to a particular discipline within classroom instruction (Goldman et al., 2016; Shanahan & Shanahan, 2012; Moje, 2015). Therefore, disciplinary literacy framed the pedagogy aligned with the integrated approach to media literacy education in this study.

Disciplinary literacy emerged in contrast to content literacy strategies. Content literacy strategies are generalizable skills aimed at making meaning from text regardless of discipline (McKenna & Robinson, 1990). Content-area literacy strategies include goal setting, predicting, inferring, summarizing, and activating prior knowledge (Chauvin &

Theodore, 2015). However, Moje (2008) explained that disciplinary literacy promotes deeper problem solving, critical thinking, and real-world learning compared to content area literacy strategies. Specific disciplinary literacy strategies include building disciplinary-specific background knowledge, engaging with technical vocabulary, deconstructing disciplinary-specific text, and supporting claims with relevant evidence (Chauvin & Theodore, 2015).

Disciplinary literacy encourages inquiry-based instruction (Moje, 2015). For example, a disciplinary literacy instructional approach promotes reading across multiple texts for synthesis, forming opinions and reasoning based on evidence of interest to the discipline, fostering arguments for and against disciplinary claims, and developing questioning techniques within students (Goldman et al., 2016; Rainey & Moje, 2012). Further, scholars have pointed out instruction related to disciplinary literacy often incorporates digital media production and evaluation practices (Castek & Manderino, 2017; Goss et al., 2016). Not only do disciplinary insiders solve particular issues and use common discourses within their community but they also use a variety of digital tools for different purposes. Additionally, Castek and Manderino (2017) acknowledged that online information must be consumed critically and applying a disciplinary lens allows the reader to evaluate specific aspects aligned with the discipline concerning the author of the text, who is deemed an authority, and methods of information collection and interpretation. Connecting disciplinary literacy and digital literacy allows for further exploration of the specific digital tools, discourses, knowledge, strategies, and dispositions teachers need to integrate media literacy within content instruction. Thus, a

disciplinary literacy prospective considers the instructional context and pedagogy in which content area teachers can implement media literacy.

Scholars have called for the merging of content-area and disciplinary literacies to situate generic literacy strategies within the culture of the discipline (Brozo et al., 2013). Similar to content-area literacy, media literacy offers generic strategies aimed at evaluating and creating media messages. Virginia content area curriculums list standards related to media literacy. For example, Media literacy objectives are located in the Virginia English language arts curriculum framework for grades 6-12. These objectives include considering the author and purpose, identifying persuasive techniques, evaluate the perspective from which the message is written for bias, and production of a media message. This inclusion of media literacy objectives presents English language arts teachers with a unique opportunity to teach students strategies to evaluate and produce media. For social science, secondary objectives focus on historical thinking, responsible citizenship, and cultural shifts in society. This presents a different disciplinary lens to analyze media compared to English language arts. While English language arts focuses on the construction of media messages, social studies objectives are aimed to enable students to situate the message within a social and/or democratic context. Thus, social science media literacy objectives promote inquiry about the message's impact on society. Science objectives include scientific reasoning and analysis of data from experimentation. However, missing from the standards that address media literacy is the importance of evaluating science texts and media. Analyzing curriculum frameworks is a starting point to understand links between media literacy and disciplinary literacy.

However, to teach effectively, teachers must unpack these standards to apply the specific knowledge, dispositions, and discourses to their content instruction.

**Deconstructing Disciplinary Literacy Classroom Practices.** This section begins by describing two frameworks for teachers to implement disciplinary literacy instruction in their classroom. The framework of core processes and constructs (Goldman et al., 2016) describes the knowledge, inquiry practices, strategies of reasoning, forms of representation, types of texts, and language structures surrounding learning objectives across content areas. Likewise, the 4 E's (Moje, 2015) provide a structure for teachers to design instruction related to disciplinary literacy. Subsections explore relevant literature related to the specialized knowledge and discourses across the disciplines.

Goldman et al. (2016) designed a framework and methodology for designing learning goals aimed at equipping students with the necessary content area and literacy knowledge to be successful across given disciplines. Researchers, teachers, and instructional specialists across content areas collaborated to investigate disciplinary core constructs including specific knowledge of the discipline, how evidence supports claims, dispositions that influence the collection of evidence to support or refute claims, types of disciplinary-specific media, and the discourse of the discipline. Using the core constructs, the collaborative team designed learning goals for English language arts, science, and social studies. They described the learning goals for English language arts as literary argumentation including synthesizing information across literary texts, articulating evidence to support or refute claims, construct arguments with evidence, and interpreting the author's rhetorical choices. Further, their science learning goals included applying

scientific principles to justify, construct, and critique explanations of phenomena as well as synthesize information from science text. Another science learning goal related to close reading of science texts to form an understanding of the discipline. Finally, their social science learning goals also contained close reading to gain disciplinary knowledge as well as synthesize information from multiple disciplinary-specific texts (i.e., historical resources, primary and secondary sources). Further, social science learning goals included explaining the relationship between historical events and evaluating historical interpretations.

Similarly, Moje (2015) developed a heuristic to assist teachers with integrating disciplinary literacy practices into their instruction and students with navigating the diverse cultures of each discipline. The heuristic is comprised of the following: Engage, Elicit/Engineer, Examine, and Evaluate. She described Engage as enculturating students into disciplinary practices. For example, teachers engage students by presenting inquiry-based tasks related to the discipline, allowing them to explore and interpret disciplinary texts and tools, engaging with disciplinary-specific media, synthesizing information for students to state their position related to a given question, and communicating student findings. Secondly, she explained Elicit/Engineer as teachers presenting the required cognitive skills, strategies, and practices to equip students to navigate disciplinary tasks. Further, she asserted that Eliciting/Engineering practices are generalizable strategies relating to content area literacy. Examine relates to the specific discourses of the discipline. Teachers must assist students with understanding how each discipline reads, writes, and communicates to participate in disciplinary learning. Building from Examine,

Evaluate refers to knowing when particular disciplinary discourses are useful to students. For example, students will write from different perspectives and for different audiences not only across disciplines but within them as well.

***Knowledge.*** Teachers who incorporate disciplinary literacy practices into their classroom must draw from different forms of knowledge to design instruction relating to their content area. These forms of knowledge can inform how teachers will design media literacy instruction to account for the specialized knowledge of their discipline. Carney and Indrisano (2013) reviewed relevant literature related to disciplinary literacy and teacher knowledge. They warned that teachers across content areas may be ill equipped to integrate literacy practices into their instruction despite their content knowledge. However, they suggested forms of knowledge from which teachers can draw to implement disciplinary literacy into their classroom. These forms of knowledge include subject matter content knowledge, pedagogical content knowledge, and process knowledge. They explained subject matter content knowledge as the amount teachers know about their given content area such as concepts and theories. Further, they described pedagogical content knowledge as not only having knowledge of the content but also the effective methods of instructional delivery. Within the domain of pedagogical content knowledge, they explained that teachers must be aware of students' ability to comprehend a given text as well as sociocultural influences that impact student learning. Finally, they describe process knowledge as the application of cognitive strategies including providing scaffolding and activating prior knowledge, presenting disciplinary-specific vocabulary, being of one's thoughts, analyzing text structures and



genres, making meaning from text, and setting learning goals. They conclude by suggesting teachers draw from a combination of subject matter content knowledge, pedagogical content knowledge and process knowledge to effectively integrate disciplinary literacy practices into their content instruction.

Further, Moje (2015) asserted that teachers must possess both deep disciplinary knowledge and deep knowledge of literacy skills to effectively implement disciplinary literacy into their instruction. Further, she continued to explain teachers must possess the knowledge of interpreting, analyzing, and evaluating disciplinary evidence and claims. Also, she described specific necessary literacy practices such as the role of texts in a given discipline, understanding how disciplinary texts contribute to student learning, and assessing both student content knowledge and proficiency with literacy practices. She acknowledged that teachers rarely learn disciplinary practices within their pre-service teacher program and called for more collaboration with veteran teachers for pre-service teachers to learn effective disciplinary literacy practices.

Focusing on practice, Hynd-Shanahan (2013) explained that teaching disciplinary literacy requires a collaboration between content area teachers, reading specialists, and instructional coaches. She discussed that each of these school-based roles approaches disciplinary literacy through a different lens and applies different knowledge toward instruction. For example, she suggested that reading specialists and coaches help content area teachers understand the specific literacy practices in which disciplinary insiders engage. Likewise, she described the need for content area teachers to implement relevant

instruction based on content knowledge as well as integrate disciplinary-specific texts beyond the course textbooks.

***Discourses.*** Each discipline uses specific technical vocabulary, different patterns of language, and awareness of the author (Shanahan & Shanahan, 2012). These differing discourses can inform how teachers will design media literacy instruction to account for the specialized language and discourses of their discipline. Through the analysis of six disciplinary-specific texts, Fang (2012) described the language patterns in each discipline and advocated for students to attend to the different variations of language used in each discipline. Through a passage from a young adult novel, he demonstrated that language used in English Language Arts was more colloquial, chronologically structured, containing verbs to express action and emotion, and presenting figurative language. For Science, he presented two articles from a scientific journal and described the language as focused on nouns, structured through logical reasoning, possessing technical and abstract vocabulary, and containing visuals to aid comprehension. He explained that social science requires creating a narrative of past events to make sense of the present. Through a common social science trade book, he described language in social science as recording, explaining, arguing, structured by cause and effect and/or chronological to explain how one event influenced another, and metaphors to describe abstract concepts in the world (e.g., policy, government, diversity).

Relatedly, Rappa and Tang (2017) acknowledged the differences in discourses across the disciplines. They examined the effectiveness of the PRO (premise, reasoning, outcome) instructional method as a scaffolding approach for students to construct

scientific explanations. Through a three-year design study in two secondary science classes, they explored whether the PRO instructional method enhanced or hindered teachers' ability to incorporate disciplinary literacy into their instruction as well as they key differences in students' language before and after engaging with the PRO instructional method. Results indicated that the PRO method offered both students and teachers a language structure which improved their overall scientific explanations. They conclude by advocating for teachers to adopt a questioning framework specific to their disciplines to enhance disciplinary-specific discourse across content areas. Similarly, they suggest that teachers should engage in professional development opportunities focusing on teacher discourse specific to their discipline.

**Disciplinary Literacy and Digital Literacy.** Scholars have examined connections between disciplinary literacy and digital literacy, such as specific media evaluation strategies and media formats valued by each discipline. While media literacy generally refers to the consumption and production of media messages, and digital literacy refers to participation in digital environments, both terms incorporate strategies to evaluate multimodal media content (Koltay, 2011). Digital evaluation and media production strategies in the disciplinary classroom connects to media literacy to allow for further examination of theoretical and instructional implications. The following studies are presented to describe frameworks and pedagogy aimed at incorporating digital literacy practices into the disciplinary literacy classroom. It is intended to inform disciplinary-specific pedagogy for media evaluation and production across content areas. A review of the literature revealed numerous connections between disciplinary literacy

and digital literacy that have implications for media literacy and teacher pedagogy across content areas.

Castek and Manderino (2017) designed a planning framework bridging digital literacy and disciplinary literacy. The Digital Literacies for Disciplinary Learning Planning Framework includes accessing and evaluating information, using and representing information, and producing and exchanging information. They explained that accessing and evaluating information in disciplinary classrooms entails understanding that analyzing information and finding relevant information should happen concurrently, background knowledge provided by disciplinary instruction can assist students with assessing the voice and authority of the text as well as the likelihood the information presented is credible and relevant. Further, they described that using and representing information is essential to disciplinary literacy because each discipline values different media forms and content. Therefore, they suggested students must apply digital and media literacy skills to engage with disciplinary-specific texts located on the Internet such as YouTube or Library of Congress. Finally, they explained that producing and exchanging information involves using digital tools to create and share authentic media such as videos, podcasts, visuals, blogs, and wikis. They suggested teachers can leverage these digital tools and media messages as mentor texts and to promote collaboration.

Similarly, Manderino and Castek (2020) described three pedagogical approaches to incorporating digital literacy into disciplinary instruction. These three pedagogies include affirming and sustaining, extending and deepening, and problematizing and

examination. They suggest teachers design instruction affirming and sustaining pedagogies and practices by bridging students in-school and out-of-school literacy practices. By doing so, teachers give students voice in the disciplinary problem they wish to investigate by incorporating authentic digital texts. They described extending and deepening pedagogies and practices as acknowledging that different media formats require different cognitive strategies for interpretation and creation. They explained that different learning context (e.g., school, home, specific discipline) and learning goals within these contexts requires specific digital tools. Thus, the selected media format as well as the environment in which the media message is shared impacts the intended audience as well as the interpretation of the message itself. Finally, they described problematizing and critical examination of pedagogies and practices as critical evaluation of media messages including production techniques and how the message was shared to specific audiences. Further, they suggested that students attend to the power dynamics within media messages to for whose voice is represented and/or omitted. Thus, they asserted that each discipline uses specific media and using the digital resources from the Internet could help students understand real-world disciplinary practices.

As an example of a classroom study bridging disciplinary literacy and digital literacy practices, Colwell and Reinking (2013) conducted a formative experiment by implementing online blogs into a middle-school social studies classroom as well as a teacher education course as an intervention. Through the online blog, middle school students and pre-service teachers engaged in conversation surrounding history text. The purpose of the study was twofold. First, they hoped to improve eighth grade students'

critical evaluation strategies when engaging with disciplinary text specific to history. Secondly, pre-service teachers reflected about effective disciplinary literacy practices to incorporate into their future classroom. Throughout the formative experiment, numerous modifications were made including overcoming school-based technology constraints (i.e., the blogging web site was blocked by the school district), integrating disciplinary literacy strategy instruction, and providing scaffolding for students to write introspective and reflective blogs rather than mere summarization. They explained outcomes of the study included middle school students blog writing gradually became more formal as the study progressed while pre-service teachers used a formal writing style throughout the intervention. Further, pre-service teachers began engaging in conversation related to disciplinary literacy during their coursework, and they gained a more positive attitude toward implementing blogging into history class. Also, they acknowledged that teachers may be resistant to changing their pedagogy, and disciplinary literacy practices may challenge students if the teacher does not incorporate explicit strategy instruction into the disciplinary lessons.

**Critical Disciplinary Literacy.** Critical disciplinary literacy attends to how content curriculums further the structures of power, privilege, and oppression underlying disciplinary cultures and practices (Dyches, 2018). Instructional choices made by teachers are political acts as they select particular texts, methods of framing text, whose voices are heard and whose are omitted, and which culture is the predominant focus of the class (Dyches & Boyd, 2017; Moje, 2007). The following studies are presented to demonstrate and discuss critical disciplinary literacy in theory and in practice. A review

of the literature outlines the importance of integrating socially just pedagogy as well as pedagogy for social justice (Moje, 2007). The review offers suggested practices to implement critical disciplinary literacy into instruction.

In a review of literature exploring the connection between disciplinary literacy and social justice, Moje (2007) described four perspectives related to socially just pedagogy. These perspectives include acquiring expert subject-matter knowledge, bridging disciplinary literacy with out-of-school practices, applying disciplinary knowledge across real-world settings, and producing knowledge from disciplinary texts. She urged educators to differentiate between socially just pedagogy and social justice pedagogy where socially just pedagogy implies providing instruction that is equitable for all students and social justice pedagogy allows students to challenge the political, social, and ideological background of knowledge. She asserted that social justice pedagogy questions dominant representations of truth to form new knowledge to promote an improved society. She pointed out that disciplinary literacy pedagogy promoting social justice links student interests as well as their cultural lens to not only the content curriculum but also how curricular topics can be applied beyond the classroom to impact communities and the broader society. However, she explained that only learning disciplinary skills and strategies are not sufficient, but students must also learn when it is appropriate to apply a given strategy or skill in a real-world setting. Specifically, she mentioned that teaching students to access, navigate, and evaluate different representations, such as print and digital media, to apply disciplinary knowledge to real-world settings. Thus, Moje (2007) asserted that teachers must empower students to

confront inequalities within the particular practices, language, and narratives spread by educational institutions. In turn, students can become critical thinkers of not only knowledge proliferated by educational institutions but how that knowledge impacts their community and the broader society.

Building on the notion of incorporating social justice into teaching practices, Dyches and Boyd (2017) introduced the Social Justice Pedagogical and Content Knowledge Framework (SJPACK). They described social justice knowledge as the languages, theories, and histories that challenge or perpetuate the status quo. Likewise, they incorporated agency into social justice knowledge and explained the importance of acknowledging that inequalities exist and that they can advocate for social change through their pedagogy. Furthermore, social justice pedagogical knowledge incorporates strategies that bridge instruction with student culture, enabling students to be critical of their lived experiences and surroundings, and transform students outlook to become aware of social issues. Finally, social justice content knowledge allows teachers to question how particular texts and knowledge contribute to promoting a dominant culture and oppressing other cultures. They explained that teachers must acknowledge that educational institutions spread inequality through language regulation, access to resources, appropriating funds for specific programs, and other educational policies. In addition, teachers must confront these inequalities within their classroom practices through incorporating real-world problem-solving activities and socially relevant topics to empower students to make positive social impacts. They argue that every pedagogical decision made by teachers is a political act that either empowers students or silences their



voices. They asserted that the Social Justice Pedagogical Knowledge Framework to be incorporated into teacher education opportunities to prepare teachers to connect social justice with their instructional practices.

Related to SJPACK, Dyches et al. (2021) explored the critical content knowledges employed by secondary English language arts (ELA) teachers to promote social justice in their instruction. Within a collective case study methodology, five ELA teachers participated in semi-structured interviews surrounding how their pedagogy aims to disrupt oppression. The interview transcripts were coded through qualitative deductive analysis using SJPACK theoretical codes. Three critical content knowledges emerged including knowledge of disciplinary critique, knowledge of marginalized identities, and knowledge of supplementary content. ELA teachers' knowledge of disciplinary critique was demonstrated through questioning the rationale behind assigning particular texts over others asserting that certain texts promote systems of power while oppressing others. Thus, they expressed their knowledge that the ELA curriculum contained political and ideological agendas upholding hegemonic cultures. The second theme, knowledge of marginalized identities referred to the lack of diversity of authors within the ELA curriculum. For example, ELA teachers expressed concern about the lack of women authors and cultural diversity within the curriculum. However, ELA teachers were able to leverage canonical texts to demonstrate to students how certain voices and identities can be oppressed. Finally, knowledge of supplementary content referred to how ELA teachers can provide readings that not only complement the canonical text but also lead to discussions about social justice. The authors suggested that incorporating supplementary

content to the preestablished ELA curriculum allows students to engage in conversations that bridge the text, the broader society, and pushing back on oppression. They concluded by encouraging teachers to reflect about how their own cultural identity impacts their pedagogy as well as integrate discussions about social justice into their instruction to reach a greater comfort level with discussing race.

As an example of critical disciplinary literacy in practice, Dyches and Gunderson (2020) described a portion of a six-week unit in a combined United States History and American Literature class exploring high school students' successes and challenges with applying a critical lens to Iowa Supreme Court documents. First, students were asked to read statements from Taylor Swift's sexual assault trial and select one quote to analyze the subtext through a critical lens. Next, the students analyzed a sexual assault article to examine how word choice impacts the intended message. Incorporating disciplinary critical literacy, a former district court judge led the class through readings of Iowa Supreme Court documents to analyze the language in the document relating to race as well as tone and syntax related to patriarchy. Afterward, the teacher led the class through discussions about discourse and critical literacy. Students were asked to consider the discourse of and apply critical literacy to an article about female justices being interrupted by male justices. During the next class session, the former district court judge led the class through a lesson on the disciplinary knowledge needed to unpack and comprehend district court documents. Finally, students analyzed Iowa Supreme Court documents by applying critical literacy to answer specific questions related to the language in the document. Through case study methodology, the researchers compared

students' pre- and post-unit survey responses using inductive coding. Findings indicated that most students responded positively to the critical disciplinary literacy lessons, but others did not. Successes included students understood the specific language and text-based features used in judicial documents as well as how language influences legal decisions, the impact of active versus passive voice, and the need to provide evidence when presenting a claim. Further, students acknowledged that their own cultural background, experiences, and biases impact the language they use. Difficulties included that some students accepted oppressive language as normal, communicated they were skeptical of the possibility of combatting oppression, avoided engaging in discussions about privilege, and were resentful that the critical disciplinary literacy lessons were taught. Likewise, some students suggested the critical disciplinary literacy units did not support their beliefs. However, the authors recommend that teachers implement critical disciplinary literacy into their pedagogy despite opposition from students since omitting lessons that bring awareness to social issues merely maintains the status quo.

Similarly, Wilson-Lopez et al. (2017) examined the influence of an engineering unit framed through critical literacy and disciplinary literacy on high school students' thinking. They explained that one goal of the unit was for students to consider how "structures and systems can privilege some groups while marginalizing others" (p. 238). Students were asked to read case studies and news reports describing innovation and technological advancements and to consider how the language in the readings presented subjects, whether certain voices were promoted and others oppressed, and the individuals or organizations that may benefit from the positionality of the message. Also, students

challenged the lack of diversity within design teams. They questioned whether certain designs could fully benefit the broad society if design teams were not representative of the population. Students were asked to create counter-designs as recommendation to benefit a larger population and promote positive social change. Finally, students considered how marginalized and underrepresented groups could have greater access to knowledge and design products. Students were asked to think beyond content standards and incorporate social justice practices to promote equity in their designs. Thus, teachers in this study encouraged students to think beyond creating innovations for merely making a profit and consider how innovation can positively impact communities and the broader society.

Critical disciplinary literacy builds upon traditional disciplinary literacy by focusing on how disciplinary cultures and practices relate to social justice pedagogy (Dyches, 2018; Moje, 2007). Pedagogical decisions made by educators are political decisions that either empower to oppress student voices (Dyches & Boyd, 2017). Therefore, teachers can implement disciplinary lessons that allow students to discuss how language can privilege certain races, genders, classes, and cultures (Dyches & Gunderson, 2020) as well as how technological advancements could further marginalize certain already underrepresented groups (Wilson-Lopez et al., 2017).

### ***Online Professional Development for Teachers***

Online professional development refers to the design and delivery of the teacher learning opportunity related to media literacy and disciplinary literacy in this study. Online professional development consists of learning activities intended for the

intellectual and/or pedagogical growth of practicing teachers offered through the Internet (Fishman, 2016). The online professional development opportunity in this study consisted of both synchronous and asynchronous sessions. Synchronous sessions occur in real time using videoconferencing software to promote social, teaching, and cognitive presence (Bates et al., 2016; Elliott, 2017). Asynchronous sessions were completed at the participants' discretion within a given time window to promote interaction, flexibility, and reflection (Bates et al., 2016; Elliott, 2017;). Synchronous and asynchronous formats were employed to promote differentiated learning opportunities (Bates et al., 2016).

The design of the online professional development incorporated effective practices outlined in relevant selected literature. For example, Elliott (2017) pointed to six qualities of effective professional development including interaction, collaboration, interest-driven and differentiation, ongoing, providing resources, and classroom implementation. Likewise, Desimone and Garet (2015) suggested effective professional development incorporates a content focus, active learning, coherence with the school curriculum, sustained duration including classroom integration, and participants who teach in a similar academic setting. At the same time, scholars recommended including coaching as an effective practice during classroom implementation (Cox, 2015; Darling-Hammond et al., 2009; Parsons et al., 2019). How these effective practices were incorporated into the design and delivery of the professional development will be further outlined in later chapters. However, online professional development offers teachers an applicable, flexible, relevant, and collaborative learning experience to design

instructional resources related to media literacy to be implemented within content area instruction.

The shift to distance learning due to the COVID-19 pandemic afforded teachers and students increased access to digital tools (Bushweller, 2020; Rauf, 2020). Likewise, the inability to meet for professional development in person presented the challenge of finding innovative methods for teacher learning for practicing teachers (Geller, 2020). The following studies are presented to examine the qualities of effective professional development opportunities for teachers as well as describe studies related to effective professional development. A review of the literature revealed professional development benefits teachers who are learning new instructional strategies (Richards & Skolits, 2009), online professional development should be interactive, collaborative, interest-driven and differentiated, ongoing, providing resources, and embedded within instruction (Elliott, 2017), teachers value online professional development related to their content area (Parsons et al., 2019), professional development should meet teachers at their current level (Woodward & Hutchison, 2018), and online professional development with hands-on activities can be an effective approach to teaching media literacy (Ranieri et al., 2017).

Teachers must gain the necessary knowledge and resources before implementing new instructional approaches. Richards and Skolits (2009) explored six teachers' classroom implementation of a new instructional strategy learned through professional development. Through their instrumental case study, they assessed how teachers apply active learning strategies after participating in research-based professional development. Also, they identified barriers that teachers typically face when changing instructional

practice. Finally, they examined the impact the research-based professional development had on teachers' use of active learning strategies. Teachers participated in semi-structured interviews. Also, the researchers observed the teachers' classroom when they implemented active learning strategies. The professional development consisted of 12 total hours of sessions. Learning activities within the professional development included modeling of active learning strategies, hands-on activities, and class discussion. Results indicated that teachers will typically implement a new instructional strategy learned through professional development if they believe it is easy to implement into their instruction, impactful for student engagement, and enhances student learning. Teachers' responses to the semi-structured interviews suggested they appreciated the instructor modeling the new strategy and having opportunities to practice during the professional development before implementing it into their classrooms. All six teachers stated they plan to use active learning strategies after engaging in the professional development. Also, five of the six teachers explained how they transferred their knowledge of the new teaching strategy to apply it in other instructional contexts. They asserted that teachers who share strategies with other colleagues could indicate teachers' level of comfort with the strategies learned in the professional development. However, only one teacher had shared the new strategy with other colleagues. Barriers to implementing new instructional strategies include the amount of class time required to effectively implement the strategy as well as teachers' comfort level. They explained that support within the classroom as well as modeling and learning about theory helped to remedy common barriers.

Elliott (2017) conducted a literature review consisting of 107 texts to explore the evolution of professional development from face-to-face to online formats. He began by citing political pressure for teachers to close the achievement gap compared to other countries. Relatedly, he explained that the formation of the Common Core State Standards added to the pressure for teachers to learn relevant future-ready skills. Through relevant selected literature, he asserted that effective face-to-face professional development practices include topics related to learning theory, constructivist, collaborative, interactive, and relevant to impact teacher practice. Further, he explained that professional development must be ongoing, designed based on data, and interest-driven. Shifting to online professional development, he suggested that the six face-to-face features previously explained such as interactive, collaborative, interest-driven and differentiated, ongoing, providing resources, and embedded within instruction are still relevant; however, he explained that online formats require special attention to teaching presence, social presence, and cognitive presence. Teaching presence includes how the course is delivered and designed. Social presence promotes interaction between learners. Cognitive presence relates to how learners engage with the course content. He advocated for online professional development to be designed within school districts rather than outsourced to outside companies to promote teacher voice and focus on needs of specific school districts. Finally, he explained that both face-to-face and online professional development opportunities should be driven by district learning goals, encompass the six features of effective professional development, and aimed at improving teacher pedagogy to positively impact student learning.



Parsons et al. (2019) conducted a survey study exploring United States teachers' perceptions of their previous experiences, motivations, and reflections related to participating in online professional development. The majority of teachers reported they participated in some form of online professional development. Of the teachers who participated in online professional development, they found greater value on topics related to a content area. Teachers indicated they participated in online professional development because it was more convenient than face-to-face options or their participation was mandatory. Further responses suggested that teachers most common benefit from participating in online professional development included accessing course materials at their convenience, engaging with others outside of their immediate geographic area, and reflecting and discussing with colleagues. As for the usefulness of online professional development, the majority of the teachers reported their experiences with online professional development were largely, extremely, or moderately beneficial, and they were able to apply the content from the professional development to their classroom instruction. As for different approaches to online professional development, teachers indicated video libraries modeling literacy instruction, videos of teachers working with students who have various needs, online book clubs, and access to a community of practice. Also, responses suggested teachers were not interested in professional development merely to be entertained as digital badging and gamification were deemed least engaging. Finally, teachers who had positive experiences with online professional development were more likely to participate in online professional development in the future.

As an example of a research study related to professional development with an online component, Woodward and Hutchison (2018) examined how personalized professional development for teachers influences their instructional planning and integration of iPads. They pointed to four themes suggested by teachers that would improve their professional development experiences. These four themes include ongoing and personalized support, time built into the professional development to implement a given strategy, access to relevant tools and instructional resources, and opportunities to extend their knowledge. With their quantitative case study, members of a first-grade team participated in a nine-week professional development opportunity combining both face-to-face and online learning components including two face-to-face workshops, emailed supports and progress monitoring, and face-to-face reflection. Data sources included a pre-questionnaire designed to inform the content of the face-to-face sessions, observations examining each participant's engagement in the workshop, goal sheets describing participants' eight-week plan to implementing iPads, weekly email logs to monitor progress, final reflection about their growth impacted by their professional development experience, and post-questionnaire to assess barriers to implement iPads. Findings indicated differences in teachers' goals, comfort, and significance related to iPads. Further, they suggested that offering professional development that incorporates support from an expert or instructional coach, time to implement the professional development content into instruction, access to tools and resources, and knowledge-building opportunities meets teachers at their current level and assists them with developing their technical, pedagogical, and/or content knowledge.

Related to media literacy and online professional development, Ranieri et al. (2017) described the e-Media Education Lab (e-MEL) project, an opportunity for practicing teachers in Belgium, Finland, France, England, Italy, and Portugal to learn digital and media literacy skills as well as evaluate media resources for classroom implementation. Further, they explored whether a blended learning approach is effective for professional development for practicing teachers. As part of the e-MEL project, they analyzed training resources designed and developed to support in-service teacher training related to media literacy. E-Media Education Lab was implemented in three phases. During the first phase, teachers explored a theoretical framework dividing competencies into media education and media literacy categories. Media education competencies encompassed both media competencies and pedagogy for analysis and production. Media literacy competencies did not include pedagogy but only the participants' ability to analyze and produce media messages. Examples of media literacy competencies include interpretation of media messages, applying media evaluation techniques, identifying audience and purpose, producing different genres of media, demonstrating knowledge of media production tool functionality, and understanding copyright and ethics. During the second phase, participants designed and analyzed resources related to news media, media analysis, and bridging in-school and out-of-school media practices to enhance instructional practices. During the third phase, resources were revised, improved, and disseminated to teacher trainers through a learning management system. Data included pre-survey results for demographic data, previous experience with media literacy education, and expectations of training programs. The post-survey focused on reflections

and suggestions from the study. Researchers also collected field notes from observation focusing on improvements to the resources. Results indicated that teachers appreciated the news media and digital citizenship resources as well as media analysis activities. Also, teachers indicated they would be able to use the media literacy resources in their content instruction. Challenges of the project included trainers had trouble managing the online platform to disseminate as well as disconnecting from the online platform as many participants wanted assistance from the trainer in off-hours. They suggested that online professional development benefitted participants in they could collaborate with others in different geographic areas and access resources at their convenience. However, they stressed the importance for online teacher educators to plan at least two face-to-face sessions at the beginning of the online course and two at the end. Planning face-to-face sessions allows the teacher educator to demonstrate how to navigate the online environment.

**Collaborative Design.** Designing curricular resources related to media literacy can be an effective form of media literacy education that can prepare teachers to provide media literacy instruction to students (Hobbs, 2017). The following studies are presented to describe collaborative design practices embedded within teacher professional development. A review of the literature revealed collaborative design promotes active engagement (Voogt et al., 2015), impacts pedagogy (Voogt et al., 2016), and improves knowledge-retention from professional development (Marin et al., 2018).

Voogt et al. (2015) explained the benefits of teachers designing curricular resources during professional development. They explained three key features of

collaborative design including the benefit of active engagement within meaningful learning contexts while sharing perspectives with colleagues, ability to design resources that promote educational and instructional change, and opportunity to engage in the recursive process of designing and improving curricular resources. They described three cases that effectively incorporate collaborative design into professional development. Across the cases, they found teachers connected their design resources to their workplace or designed for classroom implementation. Further, they suggested teachers were more comfortable designing and implementing instruction related to new approaches after collaborating with instructional specialists. Also, teachers embraced the problem-solving nature of designing authentic resources for classroom implementation. Finally, teachers felt empowered by engaging in the design and improvement of resources because they felt they had autonomy to change instructional practices.

Voogt et al. (2016) reviewed fourteen doctoral theses through content analysis methods to identify trends in the effects, mechanisms, and conditions from teachers working in curriculum design teams during professional development. Specifically, they focused on the effect collaborative design had on teachers' knowledge and instructional practice, the process in which teachers engage to design curricular resources, and the environment in which professional development can effectively promote collaborative design. Findings indicated that collaborative design allowed teachers to enhance their subject matter knowledge, develop new skills with technology, connect the use of technology with pedagogy and content, and understand the process of designing curricular resources by analyzing learning goals, content objectives, syllabi, and

structures of model curriculums. Across theses, engaging in collaborative design increased teacher ability to design quality curricular resources. Also, teachers who participated in studies that included classroom integration as part of the design process indicated their practice improved because of engaging in curriculum design teams. Mechanisms that relate to these effects include teacher prior knowledge, existing beliefs, subject knowledge, existing technology skills, and experience with designing curricular resources. Further, conditions that influence teachers participating in collaborative design include support by the professional development instructor to help the design teams organize their time and structure the process of their design, by an outside expert to enhance teacher knowledge and oversee the curriculum design process, and by technical support to prevent technological barriers to negatively impact the professional development experience, and by school-based leadership to promote classroom integration of the designed resources.

Marin et al. (2018) explored supporting teachers through online professional development that included collaborative lesson design. They intended for teachers to engage in three phases of design including conceptualizing, authoring, and implementation. During the conceptualizing phase, teachers considered content-specific learning goals, structure of the instruction, and activities to implement. Authoring, the second phase, allowed teachers to build upon the structure from the first phase. Teachers further elaborated on their classroom context and provided more detail for each activity. During Implementation, the third and final phase, teachers leveraged learning management systems to enact their design. Within the professional development, teachers

worked in groups aligned with their content area to discuss, analyze, modify, and refine their design. The researchers employed a mixed method approach to explore how teachers can be supported in online collaborative design as well as how an online instructional design tool assists with teacher learning. Findings indicated that teachers believed their designs were improved because of the collaborative element of the professional development. Also, one group member typically acted as the editor and changed elements of their design without consulting with other group mates. Teachers described barriers such as finding time for the course and common time to meet with group members. They suggested that group members or course facilitators should delineate tasks and roles for each group member. Further, they explained that not all teachers were able to complete their design within the course timeline. They suggested course facilitators to provide tutorials of applications used in the professional development and allow more time to group discussions and completion of tasks.

### **Media Literacy Across the Content Areas**

Each academic discipline values specific knowledge and skills (Rainey & Moje, 2012; Shanahan & Shanahan, 2012). Numerous authors have discussed disciplinary practices within English language arts, science, and social science instruction (e.g., Rainey et al., 2018; Rainey & Moje, 2012; Shanahan et al., 2011; Shanahan & Shanahan, 2012). For example, English language arts is portrayed as valuing close reading focusing on the content and form of the text including reading critically and communicating critiques. Further, specific knowledge in English language arts classes includes use of figurative language, rhythm, and understanding the context of a literary piece based on

time period and theme. scholars have described science as valuing experimental inquiry, observable evidence, justifiable explanations, and following an inquiry process to develop hypothesis and scientific questions. Conversely, social science is viewed as the accumulation, corroboration, and interpretation of knowledge from past artifacts. For example, historians read across multiple texts as well as consider author bias and context surrounding historical artifacts. Therefore, each disciplinary classroom has a unique opportunity to access, analyze, evaluate, create and act using media messages and media production tools.

### ***Media Literacy in English Language Arts***

Many English language arts curriculums contain learning goals related to media literacy including credibility of the author, purpose of the media message, intended audience, voice, tone, and persuasive techniques, and teachers have reported support for media literacy education (Korona, 2020). In a survey study exploring the attitudes and practices related to media literacy of secondary English language arts teachers, Korona (2020) identified fifteen teachable media literacy strategies within the participating school district's English language arts curriculum framework. Findings indicated teachers were strongly in support of teaching media literacy strategies as well as students learning them. While teachers implemented media literacy strategies with some frequency, teaching and student learning importance did not correlate with frequency of teaching. The majority of teachers indicated they teach media literacy strategies through teachable moments rather than a specific curriculum.



Hobbs (2007) explored the integration of a media literacy curriculum within an eleventh-grade English course through a mixed methods study. The curriculum consisted of the following topics: journalism and information, advertising/propaganda/persuasion, representation of race/gender/social class, and storytelling. Qualitative inquiry was employed to capture teacher and students' perceptions of the instruction as well as document the nature of the instruction. Further, quantitative inquiry was used to document student changes in performance of viewing, listening, reading comprehension, and analysis skills. Results indicate students had stronger comprehension skills in multiple formats as well as critical analysis skills of media after the completion of the media literacy curriculum. Thus, skills incorporated within traditional English Language Arts classes were strengthened by students' engagement with media literacy.

Focusing on classroom activities, Leland et al. (2018) described a series of eighth grade language arts classroom lessons designed to help students to talk back to texts. These activities were intended to prepare students to evaluate information they encounter online. Students engaged in six activities related to book studies including read-aloud group analysis, written or artistic responses, and responding to the text and censorship. While students began merely summarizing at the beginning of the study, they later employed critical reading skills including questioning the authority of the text. They found talking back to texts promotes students' practice of media criticism skills.

### ***Media Literacy in Science***

The majority of the general public receives almost all of their scientific information from news outlets after leaving high school (Carver et al., 2014; McClune &

Alexander, 2015). Thus, students must learn to apply media literacy strategies within the science classroom. Carver et al. (2014) explored the integration of media analysis techniques in a secondary biology class. Students applied the techniques to the framing, or the position presented in media messages related to controversial scientific topics, of genetics in the media. Students analyzed the content of newspaper articles to determine the frame presented by the author. Results indicated students had a greater understanding of gene-related concepts and became more critical of media messages later presented in the class including identifying the author's frame.

Related to bridging science content and media messages, Majetic and Pellegrino (2018) examined the abilities of students enrolled in an environmental science undergraduate course to perform tasks related to media literacy. Students were given a science-related news article and asked to find the related scholarly paper. This assignment was intended to give students exposure to scholarly scientific research, develop skills related to media literacy that would allow students to access scholarly research related to news articles, and evaluate the accuracy of the depiction of the scholarly research in the news. Results indicated students generally improved their skills related to accessing scholarly articles related to news stories, developing media literacy strategies, and evaluating the accuracy of the news story against the scientific paper.

Despite the benefits of media literacy integration within science instruction, policy documents make few direct references to the use of media reports in science; however, statements that could allow teachers to justify the use of media in the classroom are present (Kachan et al., 2006). Furthermore, Science and Biology teacher interview

responses suggested they use media reports to discuss current topics in science, implement resources from newspapers, magazines, and internet, and select news reports that align with curriculum topics (Kachan et al., 2006). Thus, media literacy in science-related classrooms focuses on evaluating the accuracy and position of news related to recent scientific topics.

### ***Media Literacy in Social Science***

Media literacy in social studies has recently taken the form of civic online reasoning and emphasizing the strategy of reading laterally. Civic online reasoning is “the ability to judge the credibility of information that floods young people’s smartphones, tablets, and computers” (Wineburg et al., 2016, p. 3). Reading laterally involves opening a series of tabs along a web browser’s horizontal axis to further research the components of the web site and incorporates skimming rather than close reading of the web site (Breakstone et al., 2018; Wineburg & McGrew, 2019).

McGrew et al. (2018) described the development of assessments surrounding the core competencies of civic online reasoning: Who is behind the information? What is the evidence? What do other sources say? Fifteen individual assessment tasks were designed including article analysis, homepage analysis, news search, comparing articles, social media video, website reliability, comments section, argument analysis, Facebook argument, evaluating evidence, news on Twitter, news on Facebook, and claims on social media. Students struggled to determine the veracity of online information across all categories.

Furthermore, McGrew et al. (2017) described results from three civic online reasoning assessments measuring the core competencies of civic online reasoning. Middle school students were asked to determine the level of trustworthiness of a specific online comment and whether they would use the given comment in a research paper. Taking statistics presented in the media message at face value, 40% of the 201 students stated they would use the given online comment in a research paper despite not knowing the source of the statistics. Students were asked to determine the credibility of the website [minimumwage.com](http://minimumwage.com). While the website contained research, media, an about page, and articles from the New York Times and Columbian Journalism Review, it is run by a public relations firm representing the restaurant industry. Thus, the site is biased to benefit its own corporate clients. To determine the credibility of the website, student had to search the web for more information about its organizational source. Thus, only 6% of college students and 9% of high school students found the original backers of the site. The rest deemed it trustworthy. Furthermore, other assessment results suggested students are not familiar with the term “sponsored content.”

Breakstone et al. (2019) conducted a national study of exploring how students perform on civic online reasoning assessments and how students perform based on region. The performance tasks administered included evaluating video evidence, webpage comparison, article evaluation, claims on social media 1, claims on social media 2, and homepage analysis. They found the vast majority of students struggled and scored poorly on all of the performance tasks, which was especially true for underserved student populations. Further, they called for “carefully designed, thoughtfully delivered, and

rigorously evaluated curriculum” (p. 27) to benefit students with their online evaluation skills.

Related to the implementation of civic online reasoning in the social studies classroom, Colglazier (2018) described three strategies he employed within his secondary U.S. History course to teach students to detect fake news. The strategies included showing students how to read laterally, recognizing the bias within the “about us” section of the web site, and looking beyond the first result when conducting a web search of a given organization. Further, he advocated for allowing students opportunities to practice detecting fake news within the content classroom as well as modeling critical evaluation strategies to students.

Aside from civic online reasoning, Kassinger and Kenneth (2018) described NewseumED’s approach to teaching students to identify fake news by applying a first amendment lens. They outlined five solutions to challenges for teaching students about fake news including defining what constitutes fake news and what does not, teaching students the acronym “escape” (evidence, source, context, content, audience, purpose, and execution) when evaluating online information, teaching the journalistic process, (e.g., explore case studies on fairness, accuracy, and clarity), learning from the past to impact the present, and steering away from sensationalizing and making fake news conversations too personal for the students. They concluded by advocating for accountability among students, teachers, and all citizens to share, create, and identify valid and valuable information for today’s society.

## Summary

The role of media literacy within an integrated classroom approach changes depending on the context in which media literacy is implemented (Hobbs & Jensen, 2009). Therefore, it is important to consider the specific knowledge, abilities, tools, strategies of reasoning, texts, and discourses within each discipline (Goldman et al., 2016; Moje, 2015; Shanahan & Shanahan, 2012) to seamlessly and effectively integrate media literacy into content instruction. Scholars have explored the connection between digital literacy and disciplinary literacy which offers some insight for approaches to integrate media literacy into content instruction. However, the majority of research studies related to an integrated approach to media literacy have occurred in the higher education setting, and literature related to media literacy teacher professional development reflects non-profits and other outside organizations training teachers on generic curriculums rather than instructional integration (Huguet et al., 2019). Teachers must have effective learning opportunities and curricular resources before implementing media literacy into their content instruction through a disciplinary literacy lens. Online professional development is one approach to offer effective learning opportunities because it allows teachers to access course materials at their convenience, engage with others outside of their immediate geographic area, and reflect and discussing with colleagues (Parsons et al., 2019). However, effective practices of online professional development include interactivity, collaboration, interest-driven and differentiated, ongoing, providing resources, and embedded within instruction (Elliott, 2017). Further, offering opportunities for teachers to design curricular resources within professional

development allows teachers to internalize their learning to a greater extent and increases the likelihood the resource will be implemented in their classroom (Cviko et al., 2015; Voogt et al., 2015; Voogt et al., 2016).

This study draws from existing research on media literacy, disciplinary literacy, and online professional development to inform an examination of the knowledge, dispositions, and discourses teachers incorporate when designing disciplinary-specific instruction integrating media literacy. This study explored the type of knowledge associated with the creation of curricular resources related to media literacy, habits of mind specific to each discipline when designing media literacy instruction, and vocabulary related to media literacy specific to each discipline. Also, this study explored teachers' perceptions of their media literacy proficiency and change in instructional planning when attending a 9-week professional development related to the instructional integration of media literacy.

### **Chapter Three**

An integrated approach of media literacy instruction gives core content teachers an opportunity to provide relevant, real-world learning opportunities to students related to accessing, analyzing, evaluating, creating, and publishing media messages. Further, it allows teachers to situate media literacy within the context of their own content area, promote critical thinking skills, and educate students about strategies to be applied outside of the classroom (Huguet et al., 2019). At the same time, each discipline values specific knowledge, abilities, tools, strategies of reasoning, texts, and discourses (Goldman et al., 2016; Moje, 2015; Shanahan & Shanahan, 2012). Therefore, these differences must be explored for effective instructional integration of media literacy across content areas. Before integrating new instructional approaches into their classrooms, teachers must acquire the knowledge and pedagogical practices for effective instructional implementation (Richards & Skolits, 2009). Furthermore, the shift to distance learning due to the COVID-19 pandemic increased access to digital tools for both teachers and students as well as promoted innovative methods for teacher education (Geller, 2020). Teachers should have access to digital tools and have competency of the functionality of these tools to engage in online professional development related to the instructional integration of media literacy.

#### **Research Questions**

This study examined how high school teachers integrate media literacy into their content instruction to address the specialized knowledge and discourses of their



disciplines, how they apply content from the professional development to design content lessons, and the change in their perceived competency with the instructional integration of media literacy as well as their own media literacy after participating in a 9-week online professional development opportunity with additional instructional supports. The following questions guided the study:

- 1.) After participating in an online professional development, how do teachers of different content areas differ in their delivery of media literacy instruction to address the specialized knowledge and discourses of their disciplines?
- 2.) In what ways do teachers apply the content from online professional development on the instructional integration of media literacy to design media literacy instruction?
- 3.) How do teachers' perceptions of their competency with the instructional integration of media literacy change when they participate in online professional development about integrating media literacy into their content area?
- 4.) How do teachers' perceptions of their own media literacy competency change when they participate in online professional development designing for media literacy in content instruction?

### **Research Design**

This study used a case study research design. Case study research is a mode of inquiry “used to investigate a contemporary phenomenon in depth and in its real-world context” (Yin, 2018, p. 286). Further, case study research is “an in-depth description and

analysis of a bounded system” (Merriam & Tisdell, 2016, p. 37). Cousin (2005) described case study research as related to describing, exploring, and understanding a specific phenomenon. Although case study research shares common characteristics with other qualitative designs, such being researcher-centered (i.e., researcher as the instrument) (Cousin, 2005) as well as employing empirical methods, it differs from other designs because case study research is conducted within one bounded system, such as one classroom or with one learner. Case study research is valuable for but not limited to hypothesis generating and testing (Flybbjerg, 2006). Baxter and Jack (2008) explained that case study research is effective when the researcher wants to answer “how” and “why” questions, the participants behavior will not be manipulated, the contextual conditions are of interest to the researcher, and boundaries between context and phenomenon of interest must be defined. This study met the criteria outlined by Baxter and Jack (2008) and was bounded by the online professional development opportunity. Thus, case study research was an appropriate design for this study.

When conducting case study research, the researcher must clearly identify the bounded system that is the focus of the study. Typically, case studies investigate phenomenon as it occurs within a real-world setting within the bounded system rather than collecting historical data (Hatch, 2002). Flyvbjerg (2006) asserted that studying the participants in a real-world setting provides context and depth that may not otherwise be understood. However, Cousin (2005) explained the importance of setting boundaries of the case to ensure the researcher focuses on the intended phenomenon and for the appropriate purposes within an appropriate scope. Likewise, Baxter and Jack (2008)

suggested placing boundaries on a given system such as time and place, time and activity, and by definition and context. As mentioned previously, the 9-week online professional development was the bounded system that connected each case.

In addition to setting the boundaries of a given system, the researcher must determine the unit of analysis (i.e., case). The case can be an individual participant or collective such as a specific organization or group (Yin, 2018). Although individual participants inform each case, the cases were analyzed as a collective. Since the study explored the media literacy practices of high school teachers across disciplines, teachers across each content area (i.e., English language arts, science, and social science) were the unit of analysis for the collective case. Furthermore, data from each teacher were separated to form multiple cases representing each content area.

Although some scholars have questioned the value of case study research due to the inability to generalize across populations based on one case study, Flyvbjerg (2006) pointed out that the product of case study research includes examples and exemplars that contribute to the development of new knowledge. Researchers should collect multiple forms of data when conducting case study research to improve the construct validity of the study (Yin, 2018). Collecting multiple forms of data allows for exploration through multiple lenses for further understanding of the nuances of each case (Baxter & Jack, 2008). When different forms of data are collected to measure the same phenomenon, the convergence of evidence is intended to confirm the findings from the primary data sources. Yin (2018) described data convergence as assuming one reality meant to provide a generalization informed by theory. In this study, artifacts from the online professional

development opportunity were collected to triangulate the findings from the interview and think-aloud data sources to provide analytic generalizability for each collaborative content area design team.

Relatedly, collecting multiple forms of data can help the researcher overcome researcher bias (Yin, 2018). Since the researcher is the primary instrument in case study research, researchers must be aware of their own subjectivity and position toward the case study's theoretical framework to eliminate or limit their own biases so their bias does not affect the reliability of the study (Merriam & Tisdell, 2016). Researchers must be clear and upfront about any biases they might have when conducting case study research (Yin, 2018). While some scholars have suggested that confirmation bias is often a detriment to the validity of case study research, Flyvbjerg (2006) asserted that "experience indicates that the case study contains a greater bias toward falsification of preconceived notions than toward verifications" (p. 237). Likewise, to account for internal validity, Merriam and Tisdell (2016) described member checking as gathering feedback from the participants as the researcher analyzes the data to ensure accuracy of findings. Thus, multiple forms of data collected in this study, an awareness of the researcher's bias, and member checking were intended to strengthen internal validity and limit or eliminate bias that could have affected the reliability of the study.

Case study research should be grounded within theoretical propositions to inform data collection and analysis (Yin, 2018). Relevant selected literature related to media literacy education outlines the need for teacher education opportunities to learn media production and consumption skills. Likewise, relevant selected literature related to

disciplinary literacy addresses the context in which media literacy instruction can occur within the content areas. Furthermore, online professional development offers a way to deliver learning opportunities related to media literacy integration. Underpinning the conceptual framework, constructivism offers the perspective that will guide the course design. Thus, constructivism along with existing research and frameworks related to media literacy, disciplinary literacy, and professional development informed the data collection and analysis of this study.

Additionally, Yin (2018) described multiple case study research design as another variant of single-case study. He explained that multiple case study is a robust exploration of a given phenomenon as well as the context surrounding the phenomenon. The researcher should select cases that are relevant to the phenomenon of interest, offer diversity across contexts, and provide information about the nuances of each context. Each individual case is considered a part of a larger case study research design. Because multiple case study compares and contrasts numerous single cases in relation to a particular phenomenon or condition of interest (Stake, 2006), multiple case study entails more resources and time compared to a single case study. Yin (2018) explained multiple case study begins with theory development and is designed to either show replication or a contrast between each case. Specifically, multiple case studies are intended to provide a theoretical replication by demonstrating the differences between cases or offer a literal replication of a given study by producing similar results among the cases. Theoretical replication appropriate for each research question in this study is discussed in later sections.

A multiple case study report is created by reading over the individual case reports and applying the findings to each research question. The multiple case study report should explain the logic behind predicting certain results within and between cases. The researcher must present a logical argument to accompany the assertion made from within and cross-case analysis. Findings should be supported by at least three forms of data. Triangulation is intended to confirm the correct information and interpretations are presented. Further discussion of triangulation as it relates to this study is discussed in later sections.

### **Professional Development Design**

The 9-week online professional development design was informed by Elliott's (2017) six qualities of effective professional development, the AACRA (access, analyze and evaluate, create, reflect, act) framework (Hobbs, 2010), the refined framework of new media literacy (Lin et al., 2013), disciplinary literacy (Goldman et al., 2016; Moje, 2015; Shanahan & Shanahan, 2012), and collaborative design practices (Voogt et al., 2015). The online professional development consisted of 9 modules. Activities in each module promoted constructivist learning opportunities. For example, teacher learners experienced the process of applying media literacy strategies to online information as well as designing their own media literacy lessons, constructed new knowledge through social interaction, and built upon their previous knowledge of media as well as their content curriculum. One module was assigned per week. Teacher learners met synchronously as an entire group for a total of 4 weeks. Teacher learners completed asynchronous assignments throughout the nine modules including the weeks they met

synchronously as well. Also, teacher learners were required to meet synchronously with their design team during modules 6 and 7 to complete their planning resources. Table 1 describes the concepts informing the professional development design.

Table 1

*Concepts Informing the Professional Development Design*

Aspect of the professional development	Informing Concept	Influence on the design
Professional development content	AACRA (access, analyze/evaluate, create, reflect, act) framework (Hobbs, 2010)	After providing a broad overview of media literacy, the learning goal of each module incorporated accessing, analyzing and evaluating, creating, reflecting, and/or acting related to media messages.
	The refined framework of new media literacy (Lin et al., 2013)	The refined framework of new media literacy provided depth to each category of the AACRA framework. It also informed the content of each learning module and included technical skills to consume and produce media, understanding, evaluating, synthesizing, analyzing, creating, producing, participating, and distributing media messages.

	Disciplinary Literacy (Moje, 2015; Shanahan & Shanahan, 2012)	Disciplinary literacy informed the specific contexts in which teacher learners will integrate media literacy instruction. Disciplinary literacy offered teacher learners an instructional approach that incorporates “the specialized knowledge and abilities possessed by those who create, communicate, and use knowledge within each of the disciplines” (Shanahan & Shanahan, 2012, p. 7).
	Collaborative design practices (Voogt et al., 2015)	Collaborative design practices informed the process in which teachers create their media literacy planning resources to be implemented into their classroom instruction.
Quality of professional development	Elliott’s (2017) six qualities of effective professional development	Qualities include interactivity, collaboration, interest-driven and differentiated, ongoing, providing resources, and embedded within instruction. These qualities were considered when designing the design and delivery of instruction.

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Elliott’s (2017) six qualities of effective professional development were applied to promote an effective learning opportunity for teacher learners. These qualities include



interactivity, collaboration, interest-driven and differentiated, ongoing, providing resources, and embedded within instruction. Interactivity was addressed by assigning teachers asynchronous discussion boards as well as integrating interactive videos, questions, and response prompts. The professional development was collaborative as teacher learners worked in collaborative design teams assigned by content area to complete synchronous tasks and create implementable media literacy lessons. It was interest-driven and differentiated because it was optional and intended for teachers who have an interest in media literacy. The online professional development was ongoing in that it lasted 9 weeks, and teachers created resources to be implemented into their future instruction as well. Additional resources were uploaded into Schoology for each learning module. Finally, the online professional development was embedded within instruction because teacher learners were required to implement media literacy instruction including an entire media literacy lesson into their instruction to receive feedback. Other supports included weekly online office hours offered by the instructor for teacher learners to check-in and ask questions for clarification or resolve technical issues.

The content of the first four learning modules was informed by the AACRA (access, analyze and evaluate, create, reflect, act) framework (Hobbs, 2010) as well as the refined framework of new media literacy (Lin et al., 2013). While the AACRA framework (Hobbs, 2010) offered an approach for integrating media literacy education into content instruction, the refined framework of new media literacy (Lin et al., 2013) further elucidated specific skills and strategies needed to produce and consume media in Web 2.0 environments. Thus, the refined framework of new media literacy (Lin et al.,

2013) supplemented the content of the first four learning modules of the professional development structured around the AACRA framework (Hobbs, 2010). The remainder of the modules focused on connecting media literacy skills and strategies to content curriculums as well as designing curricular documents to promote media literacy education in content instruction. Thus, modules five through nine were informed by disciplinary literacy (Goldman et al., 2016; Moje, 2015; Shanahan & Shanahan, 2012) and collaborative design practices (Voogt et al., 2015). Table 2 describes the content of each module.

Table 2

*Media Literacy Across the Content Areas Learning Modules*

Module	Learning Goal	Learning Format	Activities
Module 1 – What is Media Literacy?	Teacher learners analyzed the elements of the AACRA framework and applied strategies to access and understand media messages.	Synchronous and Asynchronous	<p>Whole and small group discussion</p> <p>Collaborative media literacy mind map activity</p> <p>Collaborative accessing and understanding activity</p> <p>Media literacy reflection journal</p> <p>Assigned reading</p>

			Reflective discussion board
Module 2 – Evaluating, Synthesizing, and Analyzing Media Messages	Teacher learners applied strategies to evaluate, synthesize, and analyze media messages including strategies to evaluate the message itself as well as web-based strategies such as lateral reading.	Synchronous and Asynchronous	<p>Whole and small group discussion</p> <p>Modeling of evaluation strategies</p> <p>Collaborative evaluation activity</p> <p>Collaborative create an infographic activity</p> <p>Media literacy reflection journal</p> <p>Assigned reading</p> <p>Reflective discussion board</p>
Module 3 – Digital Skills for Production, Distribution, Creation, and Participation	Teacher learners identified media production, distribution, and creation techniques. They also reviewed evaluation, synthesis, and analysis of media messages.	Asynchronous	<p>Assigned reading</p> <p>Reflective discussion board</p> <p>Plan to create media composition</p>
Module 4 – Creating a Media Composition	Teacher learners applied media production, distribution, and creation techniques to create a media composition to be	Asynchronous	<p>Assigned reading</p> <p>Reflective discussion board</p> <p>Create a media composition</p>

	incorporated into a content lesson.		Implement media composition
			Media literacy reflection journal
Module 5 – How Does Content Area Impact Media Literacy Education?	Teacher learners connected media literacy concepts to their content area instruction. They also reflected about effective collaborative design practices.	Synchronous and Asynchronous	Whole and small group discussion
			Critical media literacy reflection
			Analysis of content curriculum
			Assigned reading
			Reflective discussion board
			Media literacy reflection journal
Module 6 – Designing Media Literacy Across the Content Areas	Teacher learners began collaboratively designing curriculum resources for the instructional integration of media literacy while considering the unique aspects of their content area.	Synchronous and Asynchronous	Assigned reading
			Reflective discussion board
			Individual meetings with design teams
Module 7 – Continuing to Design Curricular Resources for Media Literacy Integration	Teacher learners continued to collaboratively design curriculum resources for the instructional	Synchronous and Asynchronous	Assigned reading
			Reflective discussion board
			Individual meetings with design teams

	integration of media literacy.		Finalize planning resources
Module 8 – Design Workshop: Completing Your Media Literacy Lesson	Teacher learners finalized their curriculum resources and implemented their media literacy lesson(s) which were observed by the researcher.	Asynchronous	Implement entire media literacy lesson design  Researcher observes media literacy lesson
Module 9 – Final Reflections and Next Steps	Teacher learners reflected about the design process, implementing their content lesson, and planned for sustainable change in their instruction to incorporate media literacy regularly.	Synchronous and Asynchronous	Whole and small group discussion  Feedback and coaching  Compass points reflection

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Module one provided an overview of the professional development (i.e., reviewing the syllabus, expectations, and procedures), introduced the AACRA framework (Hobbs, 2010), and presented strategies for accessing and consuming media. During the synchronous meeting, teacher learners were first asked to reflect about their experiences with media outside of school. After offering definitions of media, literacy, and media literacy, each element of the AACRA was presented and defined. Teacher learners learned background information about the history of media literacy education,

differences in the empowerment and protectionist perspectives, and pros and cons of increased media access. Teacher learners created a concept map surrounding the questions “What is media literacy? Why is it important?” The second half of module one focused on accessing and consuming media. Teacher learners watched two videos about search engines before engaging in a collaborate accessing and consuming assignment. For the accessing and consuming assignment, teacher learners searched the Internet for two websites, two images, and two videos that represent the specific knowledge, language, and tools valued by their specific discipline. They were asked to provide the URL, describe their search process, and summarize each source. Asynchronous activities included two readings related to evaluating online information and one discussion board entry that bridges the assigned readings and their classroom practice. Teacher learners implemented an accessing/consuming lesson or strategy into their content instruction and recorded their experiences within their media literacy reflection journals.

Module two focused on analyzing, evaluating, and synthesizing media messages. During the synchronous meeting, teacher learners were first asked to reflect about their experiences with online misinformation or disinformation. Then, teacher learners watched a short video about how misinformation and disinformation spreads online. Afterward, the instructor provided strategies and background information related to analyzing and evaluating online information. The strategies included asking critical questions when evaluating media (National Association for Media Literacy Education, 2007) as well as reading laterally (Wineburg & McGrew, 2019). Furthermore, the instructor presented strategies to evaluate online images, such as reverse image search.

Teacher learners engaged in small group discussion about each approach to media analysis and evaluation. Further, they collaboratively engaged with activities related to lateral reading and vertical reading, how to spot fake images, and the Bad News game. Then, teacher learners engaged in whole-group discussion about relevant pedagogy for teaching evaluating online information including mentor texts, modeling strategies, think-alouds, and scaffolding through classroom instruction (Pilgrim et al., 2017). After this discussion, teacher learners created an infographic by synthesizing the information they collected in the accessing and consuming assignment in module one. Asynchronous activities included two readings related to evaluating online information and one discussion board entry that bridges the assigned readings and their classroom practice. Teacher learners implemented an analyzing/evaluating/synthesizing lesson or strategy into their content instruction and recorded their experiences within their media literacy reflection journals.

Module three focused on digital skills for production, distribution, creation, and participation. Teacher learners completed this module asynchronously by engaging with readings and videos related to creativity and media production, types of media and its evolution, and teaching students digital citizenship. They completed one discussion board prompt that bridges the readings and videos with their practice. Then, they completed a creative brief to brainstorm their upcoming media composition assignment. The creative brief offered reflective questions for teacher learners to consider when creating their media composition. The reflective questions related to audience, purpose, effective communication, voice/tone, point of view, media selection, and place in the content

curriculum. The reflective questions were based on the concept of creative briefs offered by Hobbs (2017).

Module four focused on creating a media composition. Similar to module 3, this module was completed asynchronously as well. Teacher learners engaged with one assigned reading focusing on the affordances of different media formats. Then, they were asked to browse the examples of videos/screencasts, podcasts, and websites as well as the how-to documents associated with each posted to the Schoology course. Once they browsed the examples and how-to documents, teacher learners reviewed their creative brief from the previous module. Before creating their media composition, teacher learners reflected about their communication strategy (Hobbs, 2017) by considering how the audience might respond to their media composition. Additionally, the instructor was available for optional instructional coaching and/or consulting. Teacher learners created their media composition, uploaded the completed media composition to Schoology, implemented their media composition into their content instruction, and completed a media literacy reflection journal entry about implementing their media composition.

Module five focused on how content area impacts media literacy education. During the synchronous meeting, teacher learners reflected about their successes and barriers as well as how they would change their approach related to implementing media literacy lessons and strategies into their content instruction. Then, teacher learners engaged in whole group discussion about critical media literacy. After watching a short video about critical media literacy pedagogy, teacher learners participated in small group discussion focusing on how they can apply critical media literacy into their content



instruction. Afterward, the instructor presented the 4 E's (Moje, 2015) and discussed how the 4 E's bridge content area and media literacy. Building from the 4 E's, teacher learners discussed topics related to critical disciplinary literacy (Dyches, 2018) to bring awareness to curricular injustices and promote social justice pedagogy through media literacy integration. In small groups, teacher learners engaged in a curriculum walk to look for links between their curriculum, media literacy, and critical media literacy. They considered how to bridge in-school and out-of-school literacies to connect with students from diverse cultures and backgrounds. After completing the curriculum walk, teacher learners completed the following statement "I used to think.... Now, I think..." on a Schoology discussion board. The remainder of the synchronous session encompassed procedures for teacher learners to complete their planning resources, such as scheduling individual design team meetings with the instructor as well as practicing a verbal protocol. Asynchronous activities included one reading related to critical media literacy. Teacher learners implemented a media literacy lesson or strategy into their content instruction on a topic of their choice and recorded their experiences within their media literacy reflection journals.

Module six focused on designing media literacy instruction across content areas. Since Voogt et al. (2015) promoted collaborative design as a form of effective professional development, teacher learners were placed into design teams by content area prior to this module. Each design team met with the instructor/researcher independently to design their media literacy planning resources and participated in the think-aloud portion of the study. Prior to the design team meetings, each teacher learner viewed

examples of media literacy curriculum that were uploaded to Schoology. Then, they each completed an independent brainstorm prior to meeting. The independent brainstorm consisted of critical questions relating to the 4 E's (Moje, 2015) and media literacy. Afterward, each design team met synchronously to design their media literacy lesson. As they designed their lesson, the researcher prompted them to elaborate on their thinking process and pedagogical choices. After the meeting concluded, each teacher individually completed one discussion board entry on Schoology describing their experiences with collaborative design and the think-aloud process.

Module seven focused on continuing to design curricular resources for media literacy integration. Once again, each design team met with the instructor/researcher independently to design their media literacy planning resources and participated in the think-aloud portion of the study. Prior to the design team meetings, each teacher learner viewed examples of media literacy curriculum that were uploaded to Schoology. Then, they each completed an independent brainstorm prior to meeting. During this module, the independent brainstorm consisted of a series of reflection questions about the progress of the group. Afterward, each design team met synchronously to design their media literacy lesson. As they designed their lesson, the researcher prompted them to elaborate on their thinking process and pedagogical choices. After the meeting concluded, each teacher individually completed one discussion board entry on Schoology describing their experiences with collaborative design and the think-aloud process.

Module eight focused on implementing a media literacy lesson into classroom instruction. This module was completely asynchronous. Teacher learners were expected

to finalize and implement their media literacy lesson during this module. Also, the researcher observed each teacher learner's media literacy lesson for one class period, wrote field notes about the observation, and offered feedback to the teacher learners.

Module nine focused on final reflections and next steps. During the synchronous session, teachers reflected about ways to continue integrating media literacy into their instruction. Teacher learners engaged in whole-class discussion about their reactions to implementing their media literacy lesson as well as offered feedback to classmates about their media literacy lessons. Teacher learners completed a graphic organizer to reflect about what they need moving forward for effective media literacy instruction, what worries they have for implementing media literacy into instruction, what excites them about moving forward with media literacy integration, and their stance, steps, and suggestion for continuing to offer media literacy instruction. The professional development closed with a discussion about promoting sustainable change in the classroom related to media literacy education.

### **Setting**

This study occurred within a suburban school district in Virginia between September 2021 and January 2022. Teachers were returning to their school buildings for the first full year of in-person instruction following emergency distance learning due to the COVID-19 pandemic. Likewise, this study occurred during a time of political controversy related to the teaching of critical theories within the school district. Synchronous online professional development class meetings were on Microsoft Teams and lasted two hours in duration. Similarly, collaborative design meetings were on

Microsoft Teams and lasted 45 minutes in duration. Asynchronous assignments were posted to Schoology and were required to be completed within one week. Table 3 displays the timeline of data collection and length of each meeting.

Table 3

*Timeline of Data Collection and Meeting Duration*

Approximate Date	Phase of the Study	Length of Meeting	Data Collected
September 2021	Pre-Professional Development	30-minute interview	Pre-professional Development Interviews
September 2021	Module 1	2-hour synchronous class 1-week asynchronous activities	Discussion Boards, Reflection Journals
September 2021	Module 2	2-hour synchronous class 1-week asynchronous activities	Discussion Boards, Reflection Journals
October 2021	Module 3	1-week asynchronous activities	Discussion Boards, Reflection Journals
October 2021	Module 4	1-week asynchronous activities	Discussion Boards, Reflection Journals
October 2021	Module 5	2-hour synchronous class	Discussion Boards, Media Compositions

		1-week asynchronous activities	
October 2021	Module 6	45-minute design meeting 1-week asynchronous activities	Think-aloud Protocol, Discussion Boards
November 2021	Module 7	45-minute design meeting 1-week asynchronous activities	Think-aloud Protocol, Discussion Boards
November 2021	Module 8	90-minute class observation 1-week asynchronous activities	Observation Field Notes, Planning Resources
November 2021	Module 9	2-hour synchronous class 1-week asynchronous activities	Discussion Boards
January 2022	Post-Professional Development	45-minute interview	Post- Professional Development Interviews

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All teachers within this district have received training on Schoology as a Learning Management System prior to the shift to distance learning due to the COVID-19 pandemic. Therefore, they should be familiar with the selected learning management

system for this study. Teachers within this district have abundant access to digital tools. For example, each teacher has a district-issued laptop, and the majority of teachers have access to digital tools for media production and consumption, such as iPads or other Apple devices, within their school building. Further, software used to create audio productions has been previously installed on each district-issued laptop. Also, teachers have upgraded access to online media consumption applications, such as Newsela and PBS Learning Media, and online media production applications as well, such as WeVideo and Adobe Spark.

Students demographics in the participating district are as follows: White (43.5%), Asian (25.0%), Hispanic (18.1%), African-American (7.1%), of two or more ethnicities (5.6%), American Indian (0.6%), or Pacific Islander (0.1%). Further, 21.4% of students within the district are considered economically disadvantaged. Each student was given a district-issued Chromebook, access to applications to produce and consume media, and the ability to engage in asynchronous learning through Schoology. Numerous schools within this district are Common Sense Media certified and have engaged in some form of media literacy learning. Thus, both teachers and students have significant access to digital tools for media production and consumption and should possess some background knowledge of media literacy.

### **Participant Selection**

Participants were selected using purposive sampling. During purposive sampling, the researcher selects participants based on personal characteristics or other criteria (Johnson & Christensen, 2014). Further, Johnson and Christensen (2014) described

purposive sampling as selecting participants who “offer useful manifestations of the phenomenon of interest” (p. 420). They continued to explain that purposive sampling is selected when the researcher is examining the impact or influence of a phenomenon rather than seeking generalizations from a sample to a larger population. The selection criteria for this study included content area taught, teacher experience with their content area, demographic data, perceived mastery of their content knowledge, perceived competency with digital tools for media production and consumption, and willingness to participate in all phases of the study.

To recruit teacher learners to participate in the study, secondary curriculum specialists for English language arts, science, and social science working within one Virginia school district distributed a questionnaire via email to teachers in grades 6-12 (see Appendix A). The questionnaire was distributed to classroom teachers only and not specialists or other classroom aides. The questionnaire asked teachers to report their years of teaching experience, content area, student level taught, grade level taught, years of experience in their content area, student course level taught, years taught in content area, perceived mastery of their content knowledge, perceived competency with digital tools for media production and consumption, willingness to participate in all phases of the study, name, and email address (see Appendix B). Teachers who have a perceived high mastery of their content area were selected to participate. Also, teachers who perceive themselves as having a high competency with digital tools for media production and consumption were selected to participate as well. Selecting teachers who have high perceived competency in their content area should offer the best opportunity for exemplar

lesson designs. Likewise, selecting teacher learners with high perceived competency for digital tools for media production and consumption should alleviate technical barriers that could hinder teachers from learning the content from the online professional development.

Since Fisher et al. (2005) suggested that placing online learners into smaller groups leads to more effective learning opportunities, a total of twelve secondary teachers were selected based on questionnaire responses. When more than four teachers indicated they have the same level of mastery of their content area, same competency with digital tools, and belong to the same content area, those participants were randomly selected to participate in the study. However, five teachers dropped out of the study before the initial class meeting, and one teacher dropped out of the study after the second class meeting. The data from the teachers who dropped out of the study were removed during analysis. Teachers of the same content area were invited to participate in place of the teachers who dropped out of the study, but they declined to participate. One English language arts teacher, three science teachers, and two social science teachers remained. These teachers were assigned to an appropriate design team based on content area and completed all phases of the study. Three content area design teams were formed. Jayne designed independently within her own English language arts design team. Josephine, Kaye, and Penelope designed together within the science design team. Aaron and Molly designed together within the social science design team. Five teacher learners were female, and one was male. They had varying levels of teaching experience. Table 3 displays the participants' pseudonyms and demographic data.



Table 4

*Participant Pseudonyms and Demographics*

Pseudonym	Content Area	Gender	Years of Teaching Experience	Design Team
Jayne	English	Female	25 years	ELA Design Team
Josephine	Science	Female	9 years	Science Design Team
Kaye	Science	Female	4 years	Science Design Team
Penelope	Science	Female	5 years	Science Design Team
Aaron	Social Science	Male	5 years	Social Science Design Team
Molly	Social Science	Female	16 years	Social Science Design Team

**Data Sources**

The collected data sources included transcripts from semi-structured interviews of individual teachers occurring before the online professional development began and another semi-structured interview once it ended. Transcripts of collaborative verbal protocols of the design teams were another primary data source. Supplemental data to triangulate the primary data sources of interview transcripts and verbal protocols included

planning resources from each individual teacher learner, a reflective media literacy integration journal kept by the teacher learners, discussion board responses from Schoology, a media composition, and field notes from classroom observations. Table 4 displays each data source and phase in the study in which it will be collected.

Table 5

*Data Collection by Phase of the Study*

Before the Professional Development	During the Professional Development	After the Professional Development
Semi-Structured Interviews	Professional Development Discussion Boards	Semi-Structured Interviews
	Media Reflection Journals	
	Media Compositions	
	Planning Resources	
	Verbal Protocols	
	Observation Field Notes	

***Semi-Structured Interviews***

All six teacher learners participated in semi-structured interviews before the online professional development began (see Appendix E) as well as once the online professional development concluded (see Appendix F). Merriam and Tisdell (2016)

described semi-structured interviews as guided by a list of structured questions but allows the researcher flexibility to add or reword questions. Therefore, an initial list of structured interview questions was created. The structured questions for the pre-professional development interview explored the teacher learners' current media literacy classroom practices, perception of their current competency of the instructional integration of media literacy, perception of their own current media literacy competency, and perception of how media literacy could be aligned with their content instruction. The post-professional development interview built upon the same categories from the pre-professional development interview but also addressed their perception of how media literacy addresses the specialized knowledge and discourses of their content area and how the professional development influenced the design of their media literacy lessons. Interviews occurred online through Microsoft Teams. The online interviews were recorded through Microsoft Teams and transcribed.

### ***Verbal Protocol***

Verbal protocols are the verbal reports of participants explaining their mental process during or after completing a task (Bainbridge & Sanderson, 2005). Likewise, verbal protocol analysis is an appropriate approach when the researcher seeks to understand the participants' process of performing a task to give insight to their cognitive processing (Trickett & Trafton, 2009). Verbal protocols can be either concurrent or retrospective. While concurrent verbal protocols refer to participants verbalizing their thinking at the same time as completing the task, retrospective verbal protocols invite the participants to explain their thinking after the task has been completed (Kuusela & Paul,

2000). Since previous research has suggested participants often produce a greater amount of verbal data during concurrent analysis and could potentially forget their cognitive process during retrospective analysis (Kuusela & Paul, 2000), this study used a concurrent approach to verbal protocols as the teacher learners verbalized their thinking collaboratively as they designed their media literacy lessons.

During Module 5, teacher learners were trained in the process of participating in verbal protocol analysis. Teacher learners participated in a practice session of thinking aloud and were shown videos of others participating in think-aloud studies. As teacher learners practiced thinking aloud, the researcher kept them on task by prompting them to keep talking if they were silent for more than four seconds (Trickett & Trafton, 2009). After the verbal protocol practice was completed, each design team scheduled a time to meet with the researcher in a Microsoft Teams virtual meeting during modules 6 and 7. The Microsoft Teams meetings were intended for teacher learners to design their media literacy lessons while participating in the verbal protocol portion of the study. Each design team meeting and verbal protocol was recorded through Microsoft Teams.

### ***Media Literacy Reflection Journal***

As teacher learners participated in the online professional development, they incorporated media literacy into their content instruction. Each time they incorporated media literacy into their instruction, teacher learners submitted an entry into a media literacy reflection journal. The journal was a running document using Google Docs. It was collected through the Share feature within Google Docs. Teacher learners were asked to describe the media literacy portion of the lesson, explain whether they felt it was

successful, how they might change it in the future, the challenges they had implementing it, whether they encountered any barriers (technical or cognitive), and what they learned. The media literacy reflection journal was collected as data to examine the teacher learners' pedagogy throughout their participation in the online professional development.

### ***Professional Development Discussion Boards***

Throughout the online professional development, teacher learners were assigned asynchronous discussion board prompts through Schoology to bridge the weekly readings related to media literacy and their classroom practice. To collect the discussion board data, each discussion board entry was copied from Schoology and pasted into a Word document. Kol and Scholnik (2008) described the benefits of asynchronous discussion boards such as encouraging exchange of knowledge, affording reflection, enable deep thinking, and brainstorming with peers. Thus, professional development discussion boards were an appropriate source of data to assist with examining the online professional development's influence on the teacher learner's perception of their media literacy pedagogy and competency.

### ***Media Composition***

During module 4 of the online professional development, teacher learners applied the content from the professional development to create a video, graphic, or audio recording to be implemented in their content instruction. Hobbs (2017) explained that creating media promotes internalization and deep processing of content. Further, she explained that creating media that makes sense to others demonstrates mastery of content. Thus, teacher learners' media compositions were collected through Schoology

assignment submission to assist with the exploration of teacher competency related to media literacy.

### ***Planning Resources***

During modules 6 and 7 of the online professional development, teacher learners met virtually with their design teams to design and/or brainstorm a media literacy lesson or series of lessons to be implemented in each teacher learner's individual classroom. To frame the media literacy content, teacher learners were introduced to the AACRA framework (Hobbs, 2010) including Access, Analyze and Evaluate, Create, Reflect, and Act. Likewise, to frame the instructional approach, teacher learners were introduced to the 4 E's (Moje, 2015) including Engage, Elicit/Engineer, Examine, and Evaluate. Combining the AACRA framework (Hobbs, 2010) and 4 E's (Moje, 2015) offered teacher learners a balance of media literacy and pedagogy for the instructional integration of media literacy across content areas. While they were not required to use these frameworks to allow them to design their lessons to reflect their typical content teaching practices, the frameworks were presented to the teacher learners as a potential structure to their lessons. Planning resources refer to any notes, planning structures, graphic organizers, slide decks, or other material used to plan or implement their media literacy lessons.

### ***Observation Field Notes***

During module 8, teacher learners individually implemented their media literacy lessons. The researcher observed one class period per teacher and wrote field notes of the observations. Field notes focused on the teachers' instructional practice to implement

their media literacy lessons. Observation field notes were collected to assist with examining the influence of the online professional development on teacher learners' media literacy pedagogy.

### **Data Analysis**

Multiple case study analysis is appropriate when examining a phenomenon or situation that can be informed by collection of connected cases (Stake, 2006). Since this study explored the influence of an online professional development opportunity related to media literacy on teachers' pedagogy across content areas, a multiple case study analysis was employed. During multiple case study analysis, the researcher first analyzes the data within each case before comparing or synthesizing the patterns found across cases (Yin, 2018). Baxter and Jack (2008) explained that multiple case study analysis must be based on theory for the researcher to predict similar or contrasting results. Thus, this multiple case study employed theoretical replication rather than literal replication. For example, propositions were informed by disciplinary literacy, media literacy, and new media literacy as appropriate for each research question. Table 5 summarizes the analysis procedures within each case.

Table 6

#### *Data Analysis Procedures*

Research Question	Data Sources	Data Analysis
1. How do teachers of different content areas differ in their delivery	Transcripts from semi-structured post-professional development interviews,	Pattern matching Cross-case Analysis

of media literacy instruction to address the specialized knowledge and discourses of their disciplines after participating in an online professional development?	planning resources, and observation field notes	Deductive coding using the framework of core processes and constructs (Goldman et al., 2016)
2. In what ways do teachers apply the content from online professional development to design media literacy instruction?	Transcripts from semi-structured post-professional development interviews, verbal protocols, and professional development discussion boards.	Pattern matching  Deductive coding using the refined framework of new media literacy (Lin et al., 2013)
3. How do teachers' perceptions of their competency with the instructional integration of media literacy change when they participate in online professional development designing for media literacy in content instruction?	Pre-professional development interview, post-professional development interview, verbal protocol, media literacy reflection journals, reflective professional development discussion boards, observation field notes	Simple Time Series Analysis  Inductive open coding (Saldana, 2015)
4. How do teachers' perceptions of their own media literacy competency change when they participate in online professional development designing for media literacy in content instruction?	Pre-professional development interview, post-professional development interview, reflective professional development discussion boards, media compositions	Simple Time Series Analysis  Inductive open coding (Saldana, 2015)

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***RQ1: How do teachers of different content areas differ in their delivery of media literacy instruction to address the specialized knowledge and discourses of their disciplines after participating in an online professional development?***

The first research question examined how teachers of different content areas deliver media literacy instruction to address the specialized knowledge and discourses of their disciplines after participating in an online professional development. Data collected to address this research question included transcripts from semi-structured post-professional development interviews, planning resources, and observation field notes. Qualitative data was coded deductively as a collective case using the framework of core processes and constructs (Goldman et al., 2016). Deductive codes included epistemology, inquiry practices, strategies of reasoning, forms of representation, types of texts, and language structures. The framework of core processes and constructs (Goldman et al., 2016) was created to design learning goals accounting for the specialized knowledge and discourses for English language arts, science, and social studies. In their study, Goldman et al. (2016) explained the framework of core processes and constructs allowed the research team to compare content areas and suggest disciplinary-specific learning strategies. Therefore, the core processes and constructs (Goldman et al., 2016) was an appropriate framework to analyze the first research question because it categorizes specific elements of literacy learning to be compared across content areas.

To analyze the collective case, the researcher wrote memos, reflections, and summaries in the margins of the written data. From the written notes, the researcher

identified expanded codes related to each initial code. These expanded codes were then organized by similarity to one another to form a final set of codes. The final codes were again organized by similarity to form themes.

Then, data were separated into multiple cases by each content area analyzed within case case using a pattern matching technique (Yin, 2018). Since disciplinary literacy suggests that each content area values specific knowledge, tools, and discourses, the expected pattern was that each content area would incorporate media literacy into their instruction differently to address disciplinary-specific knowledge and within discourses specific to the discipline. Once the data was analyzed collectively and within each case, cross-case analysis was conducted. The themes that emerged from the cases representing each content area were compared to address the similarities and differences related to teacher learners' media literacy integration into content area lessons. Once cross-case analysis was completed, the findings were used to determine theoretical replication by comparing the proposition outlined by disciplinary literacy suggesting different disciplines value specific knowledge, tools, and discourses.

***RQ2: In what ways do teachers apply the content from online professional development to design media literacy instruction?***

The second research question addressed the ways in which teachers apply the content from online professional development to collaboratively design media literacy instruction. Data collected to address this research question included transcripts from semi-structured post-professional development interviews, verbal protocols, and professional development discussion boards.

Data were first deductively coded using the refined framework for new media literacy (Lin et al., 2013) to examine the teachers' application of content from the online professional development. Initial codes included evaluation, analysis, synthesis, understanding, consuming skill, creation, participation, production, distribution, and prosuming skill. The refined framework of new media literacy was designed to outline specific skills and strategies for consuming and producing media messages within Web 2.0 environments. Furthermore, the refined framework of new media literacy informed the modules of the professional development opportunity in this study. Thus, the refined framework of new media literacy was an appropriate choice to address this research question.

To analyze the data, the researcher wrote memos, reflections, and summaries in the margins of the written data. From the written notes, the researcher identified expanded codes related to each initial code. These expanded codes were then organized by similarity to one another to form a final set of codes. The final codes were again organized by similarity to form themes.

Since content area teachers must draw from different forms of knowledge to design instruction including subject matter content knowledge, pedagogical content knowledge, and process knowledge (Carney & Indrisano, 2017) and new media literacy outline specific skills and strategies to consume and produce media in Web 2.0 environments (Chen et al., 2011; Lin et al., 2013), the expected pattern was that teacher learners will apply knowledge relevant incorporating disciplinary-specific instruction as well as knowledge of new media literacy to integrate media literacy into their instruction.

Once themes were finalized, data were used to determine whether the pattern matched the proposition by examining the knowledge from which teachers draw to design instruction (Carney & Indrisano, 2017) and new media literacy (Chen et al., 2011; Lin et al., 2013) to suggest whether teacher learners will embed specific and differentiated media literacy strategies from the online professional development to enhance instruction related to content area learning goals for students.

***RQ3: How do teachers' perceptions of their competency with the instructional integration of media literacy change when they participate in online professional development designing for media literacy in content instruction?***

The third research question addressed how teachers' perceptions of their competency with the instructional integration of media literacy changes after participating in online professional development designing for media literacy in content instruction. Data collected to address this research question included pre-professional development interviews, post-professional development interviews, verbal protocol, media literacy reflection journals, reflective professional development discussion boards, and observation field notes. A portion of the semi-structured interviews explored teacher learners' perceptions of their competency with integrating media literacy into their classroom.

Data were analyzed using simple time-series analysis (Yin, 2018). Yin (2018) described simple time-series analysis as tracking a single measure over time at a number of intervals occurring in a specific sequence. Table 6 displays the number of intervals, corresponding professional development modules, and data collected at each interval.

Table 7

*List of Interval, Corresponding Professional Development Modules/Topics, and Data (RQ3)*

Intervals	Professional Development Modules/Topics	Data
Interval 1	Pre-professional Development	Pre-professional Development Interviews
Interval 2	Module 1 – Introduction to media literacy and accessing online information	Discussion Boards and Reflection Journals
Interval 3	Module 2 – Analyzing, evaluating, and synthesizing online information	Discussion Boards and Reflection Journals
Interval 4	Modules 3 and 4 – Media creation	Discussion Boards and Reflection Journals
Interval 5	Modules 5, 6, and 7 – Designing media literacy education across content areas	Think-aloud protocol and Discussion Boards
Interval 6	Modules 8 and 9 – Implementing media literacy education across content areas	Observation Field Notes and Planning Resources
Interval 7	Post-professional Development	Post-professional

At each interval, the researcher analyzed the data by writing memos, reflections, and summaries in the margins of the written data. From the written notes, the researcher open coded the qualitative data to identify initial codes that emerged. Data were organized by initial code and expanded codes related to each initial code were formed. These expanded codes were then organized by similarity to one another to form a final set of codes. The final codes were again organized by similarity to form preliminary themes. This procedure was repeated for each interval. Then, preliminary themes from each interval were compared to form final themes indicating the teacher learners' change in the perception of their media literacy integration competency.

***RQ4: How do teachers' perceptions of their own media literacy competency change when they participate in online professional development designing for media literacy in content instruction?***

The fourth research question addresses how teachers' perceptions of their own media literacy competency change when they participate in online professional development designing for media literacy in content instruction. Data collected to address this research question included pre-professional development interviews, post-professional development interviews, reflective professional development discussion

boards, and media compositions. A portion of the semi-structured interviews explored teacher learners' perceptions of their own competency with media literacy.

Data were analyzed using simple time-series analysis (Yin, 2018). Yin (2018) described simple time-series analysis as tracking a single measure over time at a number of intervals occurring in a specific sequence. Table 7 displays the number of intervals and data collected at each interval.

Table 8

*List of Intervals, Corresponding Professional Development Modules/Topics, and Data (RQ4)*

Intervals	Professional Development Modules/Topics	Data
Interval 1	Pre-professional Development	Pre-professional Development Interviews
Interval 2	During Professional Development	Discussion Boards and Media Compositions
Interval 3	Post-professional Development	Post-professional Development Interviews

At each interval, the researcher analyzed the data by writing memos, reflections, and summaries in the margins of the written data. From the written notes, the researcher open coded the qualitative data to identify initial codes that emerged. Data were organized by initial code and expanded codes related to each initial code were formed. These expanded codes were then organized by similarity to one another to form a final set of codes. The final codes were again organized by similarity to form preliminary themes. This procedure was repeated for each interval. Then, preliminary themes from each interval were compared to form final themes indicating the teacher learners' change in the perception of their media literacy competency.

### **Credibility**

When a qualitative study is credible, the findings accurately reflect the participants lived experiences yet the researcher acknowledges the findings present only one of the potentially many interpretations emerging from the data (Corbin & Strauss, 2015). Likewise, Tracy (2010) explained "Credibility refers to trustworthiness, verisimilitude, and plausibility of the research findings" (p. 842). To strengthen the credibility of the study, the researcher employed triangulation and member checking. Triangulation is collecting and corroborating multiple forms of data and evidence to strengthen the rationale for a code or theme when analyzing qualitative data (Creswell & Poth, 2018; Yin, 2018). Since this study focuses on the influence of an online professional development related to media literacy on high school teachers' pedagogy and competence as both a single collective case as well as across each content area, a single reality among the cases is assumed. Thus, in this study, multiple forms of data



including interviews, verbal protocols, and course artifacts were collected to address each research question. These data were converged to form a single reality demonstrating the teacher learners' perceptions as a collective as well as across each content area to present insights about their competence and pedagogy throughout and after the online professional development.

In addition to triangulation, the trustworthiness of the study was strengthened by employing member checking. Creswell and Poth (2018) described member checking as allowing the participants to view the preliminary findings of the study to either confirm or expand upon the preliminary report. Member checking gives the participants an opportunity to offer their own interpretations, change language, and endorse the report's accuracy (Stake, 1995). Likewise, Stake (1995) explained that member checking allows the participants to become valuable contributors to the data analysis process by offering their perspective and feedback. In this study, once the case study report was completed, the participants were sent the themes and explanation for each research question for the collective case as well as their content area research team. Participants were given the opportunity to confirm or give suggestions to revise the themes and explanations. After looking over the case reports and having a discussion with the researcher, all participants agreed with the findings and did not give any suggestions for revisions.

### ***Bias***

Researchers must acknowledge their own biases and assumptions to promote the sincerity of their own (Tracy, 2010). The researcher's biases were influenced by currently working as a technology coach at the school division where the study was conducted,

previously working as an English language arts teacher, designing the professional development on which the study focuses, and being the instructor of the professional development. The researcher's current employment as a technology coach could increase researcher bias in this study. Technology coaches are tasked with ensuring teachers integrate technology into their classrooms successfully through consulting and coaching, adapting Digital Citizenship resources, providing minor technology troubleshooting, and providing professional development opportunities. Therefore, the success of this could reflect the researcher's job productivity. Likewise, four of the six participants worked at the same school as the researcher. Thus, it was sometimes unclear to the participants whether the researcher was fulfilling a role as a technology coach, researcher, or course instructor. As the course progressed, the researcher indicated whether he was communicating information as a course instructor, researcher, or technology coach by labeling all emails with the course title and playfully stating to the participants to "ask their technology coach" if he was fulfilling his instructor role and received a question unrelated to the online professional development.

As a former English language arts teacher, the researcher could have had a bias when working with Jayne, a high school English teacher. While the researcher had deep curriculum understandings of the English language arts curriculum from designing and implementing lessons as a teacher, he only had surface level knowledge of science and social science curricula. It is unclear whether this bias had any effect on the data analysis or final report. Likewise, as the designer and instructor of the professional development, the researcher was intentionally objective when analyzing the data. While the

professional development content and structure was based on relevant selected research, he accounted for both the effective and ineffective elements of the professional development suggested by the findings. Likewise, an exit ticket at the end of the course allowed participants to give feedback. Thus, the researcher accounted for his bias and considered potential flaws in the design and delivery of the professional development. Furthermore, the researcher wrote memos, kept a journal, and employed data analysis techniques such as pattern matching and simple time series analysis (Yin, 2018) to account for any biases related to content area.

### **Summary**

This study used a case study design (Yin, 2018) to examine how teachers integrate media literacy into their content instruction to address the specialized knowledge and discourses of their disciplines, how they applied content from an online professional development to design media literacy instruction, and their perceived proficiency with the instructional integration of media literacy as well as their own media literacy after participating in a 9-week online professional development. Six secondary teachers (1 English language arts, 3 science, and 2 social science) working within one suburban school district in Virginia participated in the study. Data collection included pre-professional development interviews, post-professional development interviews, verbal protocols, planning resources, media literacy reflection journals, professional development discussion boards, media compositions, and observation field notes. Since this study examined media literacy practices within and across content areas, multiple case study analysis was employed. Specific analysis techniques were selected as

appropriate to address each research question including pattern matching, cross-case analysis, and simple time series analysis (Yin, 2018). Data were deductively coded using the refined framework of new media literacy (Lin et al., 2013) and the framework of core processes and constructs (Goldman et al., 2016) as well as inductively open coded as appropriate for each research question. To increase trustworthiness of the study, the researcher employed triangulation and member checking. The next chapter presents the findings from data analysis.

## **Chapter Four**

The purpose of this study was to examine the differences in high school teachers' media literacy integration across content areas after participating in a 9-week online media literacy professional development, how high school teachers applied content from the online professional development to design media literacy lessons, and their perceptions of their competency with media literacy integration as well as their own media literacy. Four research questions guided the study:

- 1.) After participating in an online professional development, how do teachers of different content areas differ in their delivery of media literacy instruction to address the specialized knowledge and discourses of their disciplines?
- 2.) In what ways do teachers apply the content from online professional development on the instructional integration of media literacy to design media literacy instruction?
- 3.) How do teachers' perceptions of their competency with the instructional integration of media literacy change when they participate in online professional development about integrating media literacy into their content instruction?
- 4.) How do teachers' perceptions of their own media literacy competency change when they participate in online professional development designing for media literacy in content instruction?

Six high school teachers (1 English language arts, 3 science and 2 social science) working within a suburban school district in Virginia participated in a 9-week online professional development focusing on the integration of media literacy into content instruction. Teacher learners participated in semi-structured interviews before the professional development began and once it concluded. Additionally, teacher learners participated in the think-aloud portion of the study during modules 6 and 7 of the 9 professional development modules. During the think-aloud portion, teacher learners were placed into groups based on their content area to brainstorm and design a media literacy lesson or series of lessons to be implemented into their instruction. Online discussion boards, media literacy reflection journals, media compositions, planning resources, and field notes from teacher observations were also collected to triangulate the data.

To address each research question, qualitative data across content areas was first analyzed as a collective case. Additionally, for research questions 1 and 2, data were separated into smaller cases representing each content area. Data analysis procedures varied depending on the research question (See Chapter 3). A summary of data analysis procedures and findings for each research question is outlined the following sections. Findings are organized by research question. Finally, a summary of the findings is presented for each research question.

**RQ1: How do teachers of different content areas differ in their delivery of media literacy instruction to address the specialized knowledge and discourses of their disciplines after participating in an online professional development?**

The first research question examined the differences in how teachers across content areas deliver media literacy instruction to address the specialized knowledge and discourses of their disciplines after participating in an online professional development. Data was coded deductively using the framework of core processes and constructs (Goldman et al., 2016). Initial codes included epistemology, inquiry practices, strategies of reasoning, forms of representation, types of text, and language structures. Data were analyzed using pattern matching and cross-case analysis (Yin, 2018). The data were first analyzed as a collective case to examine the common trends across all teacher learners. Then, data were separated into content area cases to examine how each content area delivers media literacy instruction. Finally, cross-case analysis was employed to examine the differences in media literacy integration for each content area.

***The Collective Case***

Two themes emerged from the data for the collective case including Media Literacy as a Worldview as well as Evaluation and Corroboration.

**Theme 1: Media Literacy as a Worldview.** Although each academic discipline values specific knowledge and skills (Rainey & Moje, 2012; Shanahan & Shanahan, 2012), all six teachers leveraged media literacy concepts to further examine societal perspectives and belief systems, phenomena in the physical world, and/or past and current events. Through the implementation of media literacy lessons, teachers required

students to reflect, represent, and examine aspects of the world through a disciplinary lens. Specifically, Jayne (English language arts) discussed how media literacy and the English language arts curriculum connect to explore the human condition as well as the authorial intent of news media. She explained the importance of promoting an openness to diverse viewpoints and questioning the author's background and affiliation, the intent of media messages, and media's impact on the broader society. Josephine (Science), Kaye (Science), and Penelope (Science) described the connection between media literacy and the science curriculum as consuming and creating representations of phenomena in the physical world. For example, Josephine and Penelope integrated media consumption and production for students to explore the relationship between macronutrients and healthy school lunches. Likewise, Kaye discussed a lesson focusing on examining online misinformation about recycling. Aaron (Social science) and Molly (Social science) explained that media literacy in the social science classroom examines media representations of historical and current events as well as considers the context and source of all media. Thus, social science teacher learners' media literacy lessons focused on shaping students' perspectives and background knowledge about historical figures and events through online research (i.e., Lewis and Clark, famous scientists). Therefore, all of the six teacher learners leveraged media literacy concepts to examine real-world topics and phenomenon related to their specific academic discipline. Figure 1 displays how the teacher learners across content areas integrated media literacy into their content instruction as a worldview to address the specialized knowledge and discourses of their disciplines.



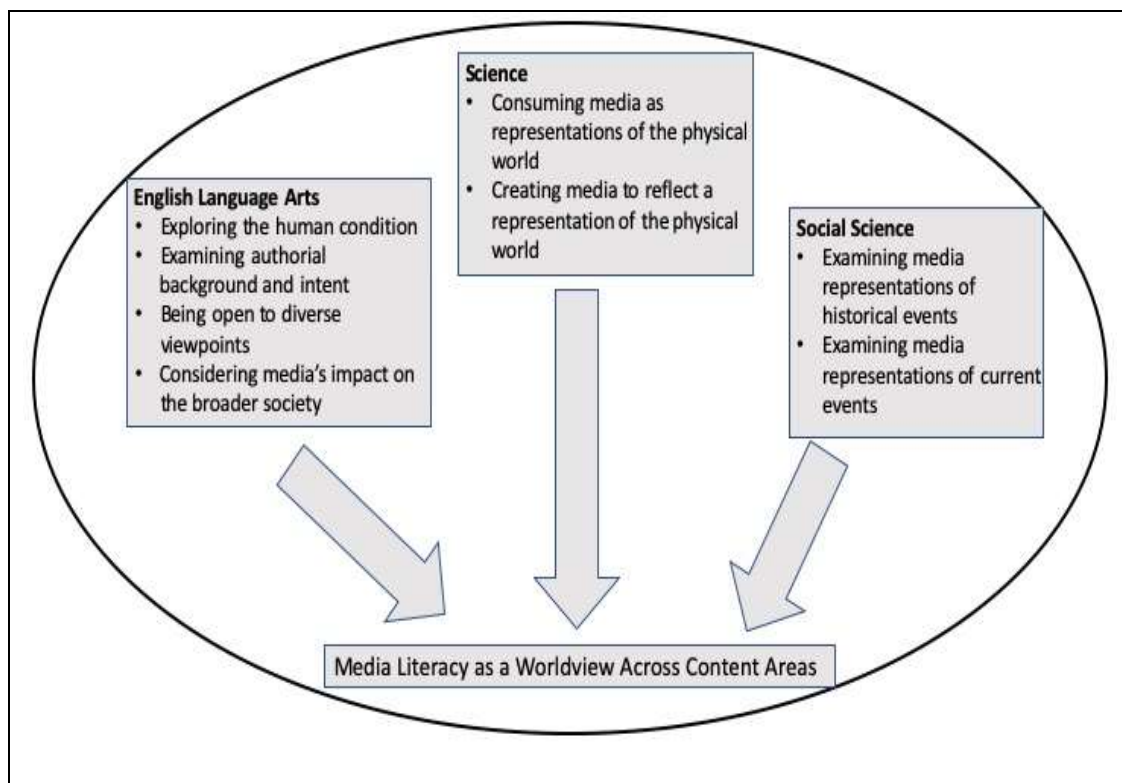


Figure 1

*Media Literacy as a Worldview Across Content Areas*

**Theme 2: Evaluation and Corroboration.** All six teacher learners implemented media evaluation and corroboration as a form of media literacy education into their instruction. During Jayne's media literacy lesson, students compared and contrasted an article from Newsela with an article on the open web. Students applied generalizable skills aimed at making meaning from text such as attending to non-fiction text features, summarizing and synthesizing online information, annotating, and connecting text to self. She did not teach the students lateral reading or critical questions to evaluate online information as presented in the professional development. However, students

corroborated multiple online sources and evaluated online information using content literacy strategies. Two of the three science teacher learners, Josephine and Kaye, asked students to corroborate information from multiple websites and other online media as well as peer-reviewed scientific journals. To evaluate sources, students were asked to consult with outside web sites, classmates, and the teacher to determine reliability of information. The social science teacher learners, Aaron and Molly explicitly taught lateral reading before their students began evaluating online information. Their students evaluated and corroborated primary, secondary, and tertiary sources from the open web as well as provided by the teacher to perform research on historical figures and events. Thus, all six teacher learners incorporated media analysis, evaluation, and/or corroboration as a form of media literacy education within their instruction regardless of academic discipline. Figure 2 displays how each content area incorporated disciplinary-focused evaluation and corroboration into their media literacy instruction.

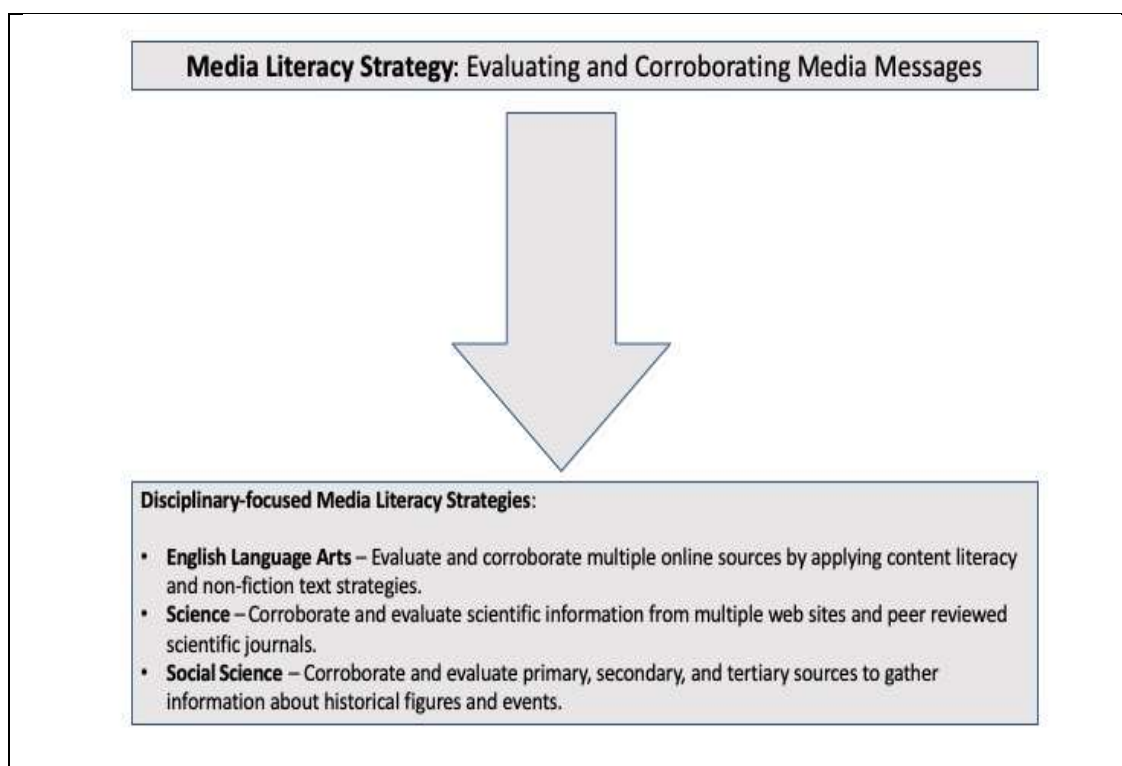


Figure 2

*Disciplinary-focused Evaluating and Corroborating Media Literacy Strategies*

***Case 1: English Language Arts***

The data from one English language arts teacher (Jayne) were analyzed as one case to address how English language arts teachers may integrate media literacy into their instruction to address the specialized knowledge and discourses of their disciplines at the conclusion of an online professional development. Two themes emerged including Consideration of Diverse Belief Systems and Interpreting Online Information.

**Theme 1: Consideration of Diverse Belief Systems.** Jayne indicated that consideration of diverse belief systems is an essential component of English language arts instruction and integrating media literacy into her existing instruction provided more

structured opportunities for students to analyze diverse viewpoints in non-fiction text. She said, "...but I think the most important [media literacy concept] that aligns with my curriculum is questioning viewpoints... I encourage my kids to be sensitive to all audiences... [and] get a different perspective. I think it is important." She acknowledged her students have varying backgrounds and belief systems, and implementing media literacy into English language arts instruction invites students to question their own biases and reflect about opinions different from their own.

Aligning with important English language arts concepts such as considering audience and purpose, she suggested that integrating media literacy into English language arts instruction informs students' perspectives about how different audiences might react to information published online. She said,

Again, what's the viewpoint you're putting out there? You know you may have that viewpoint at this moment in time, but it may shift. Are you going to offend anybody? How are people that could be offended going to take it? Do you want it out there?

Furthermore, Jayne explained that bridging medial literacy and English language arts instruction encourages student self-reflection, exploration, and dialogue with classmates, adults, and texts. As Goldman et al. (2016) explained that creating narratives is an important aspect of English language arts instruction, Jayne described how she leveraged media for students to create narratives. For example, within Jayne's final media literacy lesson, students were given the choice to use Flipgrid or present in person to explain how they relate the news articles to their own lives. Related to bridging media literacy and

creating narratives, she indicated that she incorporates media creation for students to express and represent their lived experiences. She explained,

My creative writing kids are constantly creating media... You know, I talked about their digital footprint. What's out there? All stories should be stories that they can tell... They've written letters. That was an assignment they talked about family traditions. They've talked about items passed down... Then, they get to share, and we conference, read, and discuss.

In these ways, Jayne stressed the consideration of diverse viewpoints through media literacy within her English language arts instruction. This finding aligns with Goldman et al.'s (2016) assertion that English language arts instruction emphasizes the consideration of diverse viewpoints as well as expresses student viewpoints through narratives.

**Theme 2: Interpreting Online Information.** Jayne indicated that instructing students to interpret online information is an essential component of English language arts instruction and integrating media literacy into her existing instruction provided systematic opportunities for students to interpret online information. For Jayne's final media literacy lesson, students selected an article from Newsela and corroborated it with an article from the open web. Students synthesized both articles focusing on the news articles' scope, their personal reactions to the article, and how the article is situated within their own lives. She explained that giving students the autonomy to interpret information on their own is a necessary life skill that requires students to apply specific knowledge and discourses valued by English language arts. She said,

I liked my last lesson in how kids were able to find a news article on their own instead of me giving them all of the information. I think, it takes the creativity out of the students' hands [when we give them online sources] when we want them to be active learners and lifelong learners. And really, practicing something that's a life skill for them, and eventually, they're going to be researching things... You know, some of my kids just started a text set in Newsela today on self-image... but they may not want to talk about self-image... I feel more inclined to encourage them to gather perspectives on their own.

Furthermore, she emphasized that she suggests students use Wikipedia as a starting point to interpret online information. She said, "I think taking away some of the negativity surrounding Wikipedia was great since that tends to pop up so quickly for kids."

Likewise, Jayne's media literacy lesson highlighted critical evaluation. However, she incorporated content literacy rather than media literacy strategies. Content literacy consists of generalizable strategies to assist students with comprehending the content of a text (McKenna & Robinson, 1990). Examples of content literacy strategies implemented by Jayne included considering the structure of the text (i.e., headers, bolded words, phrases, italicized words), summarizing the article, and taking notes. In contrast, media literacy strategies related to evaluation and corroboration include determining the author's background and any supporting organizations, intended effects of the article's content on different audiences, and whether the text presents credible information. For example, students were asked to consider both articles' headers, bolded words, phrases, and italicized words. Likewise, students made annotations, summarized and synthesized

the articles, and explained their non-fiction text strategies and reading skills. She suggested that she intended for students to discuss drawing text connections as a part of critical reading. Although she did incorporate explicit strategies for students to access or evaluate online information (e.g., search operators, lateral reading, critical questions), the primary focus of the lesson related to students applying generalizable strategies aimed at making meaning from text when interpreting online information to relate text to self rather than evaluating to determine the credibility of the text.

### ***Case 2: Science***

The data from three science teachers (Josephine, Kaye, and Penelope) were analyzed as one case to address how Science teachers may integrate media literacy to address the specialized knowledge and discourses of their disciplines at the conclusion of an online professional development. Three themes emerged including Corroboration to Explain, Generalize, and Express, Exploring Phenomena, and Reliable Evidence.

**Theme 1: Corroboration to Explain, Generalize, and Express.** Josephine, Kaye, and Penelope suggested that media literacy in science instruction involves corroborating science-related media including websites, online videos, and peer-reviewed academic journals. Media literacy concepts were situated within a research context in each of their final lessons. Further, Josephine and Penelope leveraged media creation for data collection as students took pictures of school lunches to corroborate their written data. Penelope explained, “[Students] had to take pictures of the school lunches throughout the week and then check the nutrition facts against that with what [our school district] posted [on their website].” Similarly, Josephine said,

[Students] had to look for different sources of information and compare them and see whether it matches what we learned in class. They looked at what the other sources were saying, and the whole point was to figure out if what the school says we needed to eat was what they were serving.

Similarly, all three science teacher learners indicated they invite students to consume and create different representations of scientific media to explain, generalize, and/or express. For example, Penelope and Josephine showed videos to their students explaining the concept of macromolecules. Kaye described sending videos to students through Schoology explaining organic farming. Likewise, Kaye's final media literacy lesson invited students to create images explaining the relationship between habitat, invasive species, and endangered species. Josephine described a unit on viruses that leverages media to generalize virus precautions for the broad public. She explained,

We have a section in the year where we talk about viruses, and right now in particular, that's very important. Students are seeing information about what's safe, what's not safe, how the virus is being transmitted, and so I think moving forward that's going to be something that we do. Probably every year from this point.

Penelope and Josephine's media literacy lessons asked students to express themselves through media. Students wrote persuasive emails to the school district nutrition office using evidence to support their claims about the nutritional value of their school lunches. Thus, science teacher learners' integrated media literacy concepts for students to



corroborate online information to explain, generalize, and express related to the specialized knowledge and discourses of science.

**Theme 2: Exploring Phenomena.** All three science teachers leveraged media literacy concepts to explore phenomena in the physical world. For example, Kaye described implementing accessing online information strategies for students to conduct research online. She said, “Since the course, we’ve been working on food, and so I’ve been having them accessing media in terms of finding information. They’ve been watching videos on what organic farming looks like.” Likewise, Kaye explained that students have accessed and evaluated online information about ecosystems to create a series of images depicting a given ecosystem. Furthermore, she offered an extension assignment where students could have produced a video of a given ecosystem in addition to their series of images. Josephine and Penelope leveraged media consumption by providing background information on macromolecules, food proteins, carbohydrates, and related terms for students to conduct research about school lunches. Additionally, Penelope described a project she plans to implement in the future related to genetic diseases. She explained that students will access, evaluate, and synthesize online information to examine cell respiration and ecology. Thus, the science teacher learners incorporated media literacy concepts into their instruction to examine phenomena in the physical world.

**Theme 3: Reliable Evidence.** All three science teachers indicated the need to leverage science-related media sources to build logical arguments and explanations using evidence. Further, they emphasized that students consider the reliability of evidence

through evaluating media for research. For example, Kaye explained the importance of considering the reliability of online sources. She said,

There's a lot of misinformation out there and teaching environmental science [online misinformation] is a hot topic. You can easily find information online that people will just write articles to get more Google hits, but they're not necessarily true. For example, my academic environmental classes are learning about food and packaging... [and they're] researching information about recycling... There's a lot of myths out there, so the students have to dig for real information. There is a disconnect between people who want to write stuff so everyone wants to recycle, and be that good person. Some people write that you can't recycle this or that, but it's not necessarily true, but they want to get the clicks. So, just showing [students] to find the truth is a valuable skill.

Similarly, both Penelope and Josephine encouraged students to evaluate the credibility of their information by consulting other sources, collaborating with classmates, or asking the teacher when conducting online research for science-related topics. Further, Penelope suggested that media literacy supports building arguments within the science classroom. She explained,

Macromolecules is a tough unit for students to understand but leading them through the relevancy of macronutrients puts it into perspective that is easier for the students to understand. We included the argumentation piece which requires scientific research. This opens up many avenues for media literacy.

Thus, the science teacher learners emphasized the need for students to evaluate online media to incorporate reliable evidence for building science-related arguments within their instruction.

### ***Case 3: Social Science***

The data from two social science teachers (Aaron and Molly) were analyzed as one case to address how social science teachers may integrate media literacy to address the specialized knowledge and discourses of their disciplines at the conclusion of an online professional development. Two themes emerged including Corroboration of Media and Representing Societal Perspectives.

**Theme 1: Corroboration of Media.** Aligning with Goldman et al.'s (2016) assertion that social science instruction privileges corroborating historical documents, Aaron and Molly's media literacy lessons centered around the corroboration and evaluation of primary, secondary, and tertiary online sources. Aligning media literacy and the specialized knowledge and discourses of social science, Aaron asked the students to access and corroborate online sources to conduct research on scientists throughout history. Likewise, Molly's students corroborated online sources to further examine the Lewis and Clark expedition. Both teachers explicitly taught students how to read laterally and instructed them to reflect and explain each step of their process for evaluating online information. Aaron explained how corroborating online sources aligns with media literacy,

The project [Molly] and I put together did take a lot of [online evaluating and corroborating]. A lot of that skill, media analysis... our project was having the

kids pick one of the early scientists or one of the times of the revolution guys.

They did some research showing why they are important and why their discovery was important.

Once Aaron's students evaluated and corroborated online information, they synthesized their information on an infographic. Thus, Aaron situated accessing, evaluating, and synthesizing media into his instruction to bridge media literacy and the specific knowledge and discourses of social science.

In Molly's lesson, students were presented with a primary source from the Lewis and Clark expedition. In groups, students analyzed the primary source in terms of audience, purpose, and point of view. Each group member located an online secondary source and performed lateral reading to determine the source's credibility. Once the information was corroborated and evaluated, students synthesized the information by creating an image in Google Draw. Molly explained that she hopes to move from giving students primary sources to having students locate them. Similar to Aaron, Molly situated accessing, evaluating, and synthesizing media into her instruction to bridge media literacy and the specific knowledge and discourses of social science. She said,

I think one thing I've learned to do, and I'm taking baby steps is to let go of some of the control and give more of it to the kids. Because I tend to give them resources to use and analyze. Even I do that to introduce topics and ideas, I want to get to the point where I can trust them to find the rest of their resources, so that's much more student-centered. I can't be the fountain of knowledge, so it's their job to use their skills with the internet.

Thus, both social science teacher learners featured media corroboration as an instructional goal related to social science but incorporated media literacy concepts to assist with document analysis. Media literacy concepts included accessing, evaluating, and creating media.

**Theme 2: Representing Societal Perspectives.** Both social science teachers suggested that media literacy represents and examines historical, political, governmental, technological, and geographical perspectives. Thus, they explained that students consume media in social science class reflecting past and current events, notable figures, and varying perspectives. Likewise, students create media in social science class to represent, evaluate, or respond to these societal perspectives. Molly explained,

Particularly in today's climate, there's a lot of stuff out there about what is and what is not true. What is and what is not the meaning of American history. We just finished the Civil War today, so we're starting reconstruction, which you know there's a lot of loaded issues in there. As [students] search and try to confirm things or find resources, especially secondary sources. I want them to be sure that they're legitimate academic things rooted in what we know are the truth.

Similarly, Aaron described the interaction between media literacy and content knowledge. He said,

... what the project basically has the kids doing is they have to pick one of the impacts of the industrial revolution you know, and they have to talk about its short-term impact and its long-term impacts. How do we still see that issue represented today? So, it could be either a positive or a negative thing, right? It

could be they choose the idea of the creation of the minimum wage or they choose child labor or they choose, environmental pollution or whatever. They have to put together a presentation where they're basically maybe like right. You know, I'm looking at the gender pay inequality between men and women, right? Tell me how did this gender pay inequality start during the industrialization? Why was it started? How did they justify? And then over time, how have we seen this issue evolved? Do we still see a gender pay inequality? They'll have to make a video presentation, or they have to record themselves describing whatever issue or impact they wanted to focus on.

Specifically, Aaron and Molly both indicated that media literacy offers a window to history and modern society that directly aligns with specific knowledge and discourses of social science. For example, Aaron mentioned, "Part of history is modern day history. Being able to utilize these skills to analyze and understand modern culture and society. I think that's really where [media literacy] links very well with my class."

### ***Cross-Case Analysis***

Cross-case analysis was employed to address the differences in which teacher learners implement media literacy into their instruction to address the specialized knowledge and discourses of their disciplines. Once data were analyzed as a collective case and then within separate content area cases, the reports from each case were analyzed to determine similarities and differences. Three themes emerged from cross-case analysis including Perspectives, Making Meaning, and Discourses.

**Theme 1: Perspectives.** Across all content areas, teacher learners leveraged media literacy concepts to examine real-world topics and phenomena. While media literacy was implemented as a cognitive tool used to read the world, each content area case differed in the perspective from which media literacy was implemented. As each academic discipline privileges specific knowledge, tools, and skills (Shanahan & Shanahan, 2012), media literacy was embedded within each content area's established disciplinary culture. For example, Goldman et al. (2016) explained that English language arts privileges knowledge that examines the human condition and our lived experiences. This perspective is reflected when Jayne implemented accessing and analyzing online information for students to consider diverse viewpoints and reflect about their own belief systems and biases. Additionally, bridging media creation and specific knowledge privileged by English language arts, she indicated she incorporated short video responses for students to create narratives and explain their own belief systems.

Science privileges knowledge that examines and explains phenomenon occurring within the physical world (Goldman et al., 2016). This perspective is reflected when the science teacher learners embedded media literacy concepts such as accessing, evaluating, and creating media within instruction for students to research disciplinary-specific topics. Specifically, science students leveraged media literacy strategies to further examine nutritious school lunches and ecosystems. Further, they embedded creating and publishing for students to demonstrate their disciplinary-specific background knowledge. Therefore, media literacy was embedded within instruction to address knowledge pertaining to phenomena occurring within the physical world.

Social science privileges knowledge that challenges interpretations and assumptions stemming from historical and current events (Goldman et al., 2016). This perspective is reflected when the social science teacher learners consumed and evaluated media to examine past and current events, notable figures, and varying societal perspectives. They explained that students in social science create media to represent, evaluate, or respond to societal issues. Therefore, the social science teachers embedded media literacy concepts within their instruction to further examine knowledge related to historical, political, governmental, technological, and geographical.

Across cases, media literacy was implemented into instruction as a cognitive tool to build knowledge used to make meaning from media related to the world. However, media literacy instruction was delivered to address specialized knowledge of each specific discipline. Although the media literacy strategies themselves did not change, implementing these strategies supported the delivery of disciplinary-specific knowledge often through research and other constructivist approaches. Thus, the perspective from which media literacy as a cognitive tool was integrated into instruction differed across cases to address specialized disciplinary knowledge. Figure 3 displays examples of how each content area leveraged media literacy as a cognitive tool through their unique disciplinary perspective to read the world.



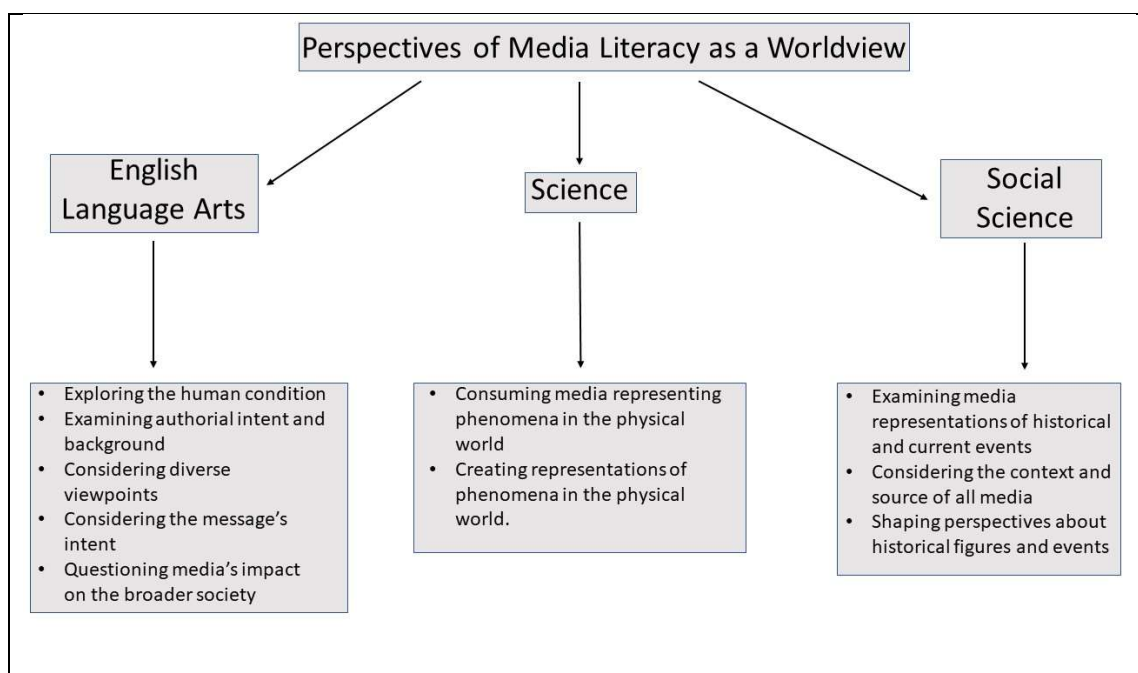


Figure 3

### *Perspectives of Media Literacy as a Worldview*

**Theme 2: Meaning Making.** Across all cases, teacher learners leveraged media literacy concepts to make meaning from media through corroboration, interpretation, and evaluation. However, each content area case implemented activities for students to make meaning from online text to privilege the specialized knowledge of the discipline. For example, Jayne asked students to corroborate and synthesize online information to examine personal beliefs, reactions, biases, and impact of selected news articles. Likewise, she asked students to apply content literacy and non-fiction text strategies to interpret online text. The science teacher learners implemented media literacy for students to corroborate scientific online text to explain phenomena, generalize data for selected populations, and express logical scientific arguments using reliable evidence.

Similarly, social science teacher learners leveraged media literacy for students to corroborate primary, secondary, and tertiary sources related to historical and current events. Thus, English language arts privileged making meaning from non-fiction text for personal interpretation and exploration, science teachers made meaning from science text to build logical arguments, and social science teachers made meaning from corroborating documents for historical understanding. Therefore, each content area case differed in leveraging media literacy to make meaning within their disciplinary cultures. Figure 4 displays the differences in how each content area made meaning through media literacy instruction.

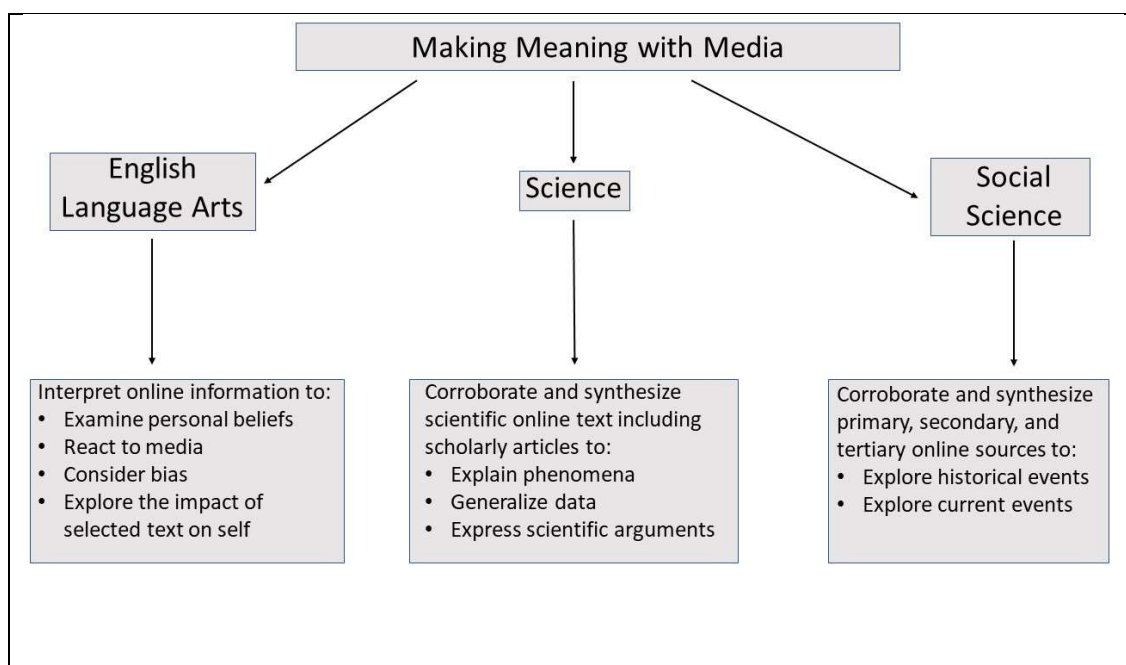


Figure 4

### *Making Meaning with Media Across Content Areas*

**Theme 3: Discourses.** Discourses refer to the “oral and written language forms that express information” (Goldman et al., 2016, p. 224). Each content area uses specialized vocabulary and language within their disciplinary culture. One of the discourses related to English language arts includes identifying patterns and organization of written text and language (Goldman, et al., 2016). This discourse is reflected when Jayne asked students to apply specific non-fiction text features and content-area reading strategies to interpret online text. Students bridged discourses related to English language arts with media literacy when they accessed information from the Internet and applied

strategies specific to English language arts. Figure 5 displays the discourses used when teacher learners integrated media literacy into their instruction.

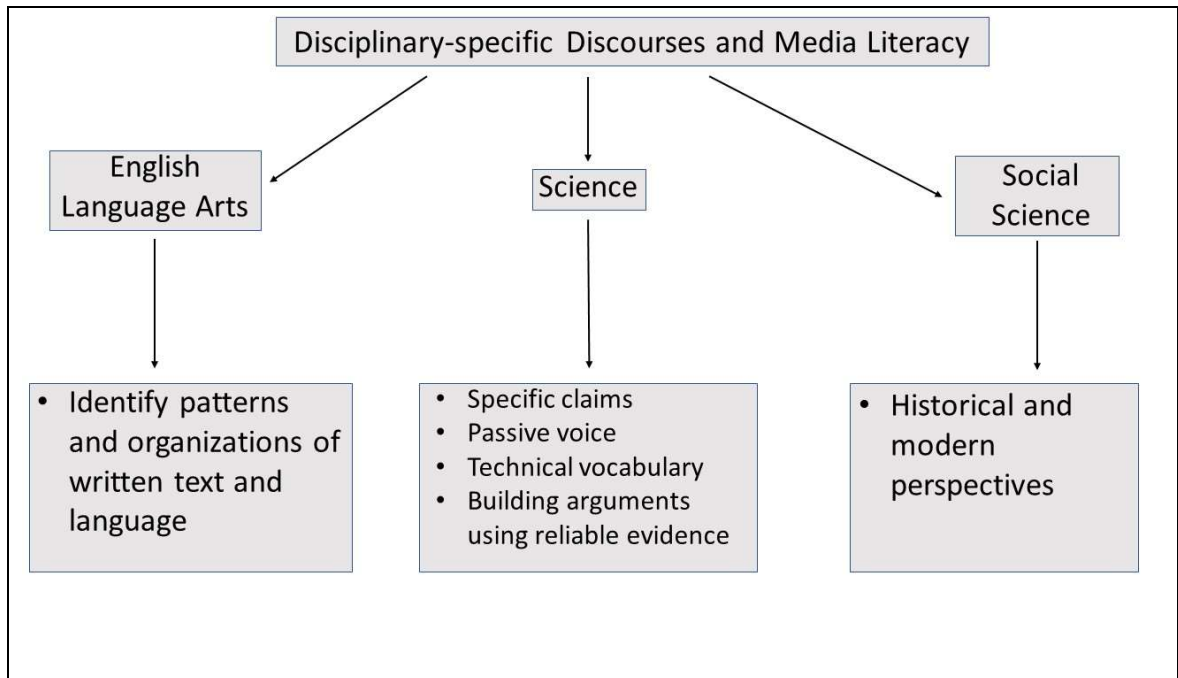


Figure 5

*Disciplinary-specific Discourses and Media Literacy*

Science discourses incorporate specific claims, passive voice, and technical vocabulary (Goldman et al., 2016). This discourse is reflected in the technical vocabulary the science teacher learners used throughout the study. Technical vocabulary specific to science included ecosystem, macronutrient, and macromolecules. Additionally, science

teacher learners privileged language structures aimed at building scientific arguments using reliable evidence.

Social science discourses privilege argumentative language that communicates and reflects historical or modern perspectives (Goldman et al., 2016). This discourse is reflected in the specialized language and online resources the social science teacher learners use to evaluate and corroborate historical primary, secondary, and tertiary sources. Likewise, this discourse is reflected in the teachable moments Aaron and Molly implemented into their instruction bridging current events and media literacy. In their final media literacy lesson, both teacher learners referenced the need to evaluate online information students receive from social media.

Each content area case demonstrated they privilege specific discourses and language structures specific to their academic discipline. Additionally, they incorporated media literacy to address their specific disciplinary discourses differently. English language arts leveraged discourses related to accessing and evaluating online information to apply non-fiction text structures. Science discourses related to incorporated accessing, analyzing, evaluating, and creating media to build scientific arguments stemming from evidence from online sources. Social science emphasized discourses related to evaluating online information to determine the credibility of historical documents. Thus, language related to the academic disciplines and media literacy concepts were aligned and integrated to reflect specific disciplinary classroom cultures.

## *Summary*

The first research question addressed the differences in which teachers of different content areas deliver media literacy instruction to address the specialized knowledge and discourses of their disciplines. Since the concept of disciplinary literacy suggests that each content area values specific knowledge, tools, and discourses, the expected pattern was that each content area would incorporate media literacy into their instruction differently to address disciplinary-specific knowledge and within discourses specific to the discipline. Cross-case analysis was employed to illuminate the differences in media literacy integration across content areas.

Data were first analyzed as a collective case. The findings from the collective case suggested that the teacher learners incorporated media literacy concepts to examine real-world topics and phenomena related to their specific academic discipline. Additionally, teacher learners applied media literacy concepts with a focus on evaluating and corroborating disciplinary-specific text.

Then, data were separated into cases representing each content area. The English language arts teacher learner incorporated media literacy into her instruction to address diverse belief systems and interpret online information. Science teacher learners incorporated media literacy into their instruction to corroborate disciplinary-specific media to explain, generalize, and express, explain and explore phenomenon in the physical world, and build arguments with reliable evidence. Social science teacher learners integrated media literacy into their instruction to corroborate primary, secondary, and tertiary sources as well as represent societal perspectives.

After data were analyzed within each content area case, cross-case analysis was employed to examine the differences between each content area case. Differences across cases included the context in which media literacy was implemented to examine knowledge privileged by specific academic disciplines, methods for making meaning within disciplinary contexts using media, and specific instructional methods bridging media literacy and disciplinary discourses. Thus, findings matched the expected pattern of each content area would incorporate media literacy into their instruction differently to address disciplinary-specific knowledge and within discourses specific to the discipline. Additionally, teacher learners incorporated media literacy into their instruction as a cognitive tool to privilege the knowledge and discourses set forth by Goldman et al. (2016) for each academic discipline.

**RQ2: In what ways do teachers apply the content from online professional development on the instructional integration of media literacy to design media literacy instruction?**

The second research question addressed the ways in which teachers apply the content from online professional development to design media literacy instruction. Data was coded deductively using the refined framework for new media literacy (Lin et al., 2013) to examine the teachers' application of content from the online professional development. Initial codes included evaluation, analysis, synthesis, understanding, consuming skill, creation, participation, production, distribution, and prosuming skill. Additionally, 4 E's and pedagogy were added as initial codes to account for the instructional approaches intended to situate media literacy concepts into instruction. Data

were analyzed using a pattern matching technique (Yin, 2018). The data were first analyzed as a collective case to examine the common trends across all teacher learners. Then, data were separated into content area cases to examine media literacy integration for each content area.

### ***The Collective Case***

Four themes emerged from the data for the collective case including Building Disciplinary-specific Background Knowledge, Explicit Media Literacy Strategy Instruction and Support, Student Application of Media Literacy Processes, and Media Products to Demonstrate Disciplinary Knowledge.

**Theme 1: Building Disciplinary-specific Background Knowledge.** As teacher learners designed their final media literacy lessons, all six teachers leveraged accessing, analyzing, evaluating, and reflecting about online information to build disciplinary-specific background knowledge. For example, five of the six teacher learners (Science and Social Science) designed multi-day media literacy lessons centered around research. Their designs asked students to search the open web to find credible information about ecosystems, healthy school lunches, scientists throughout history, and the Lewis and Clark expedition as appropriate for the content area. Jayne, an English language arts teacher, designed a one-day lesson incorporating non-fiction text structures and critical reading strategies to access and analyze online news media. Thus, teacher learners across content areas designed their media literacy lessons by situating critical media consumption within their content instruction for students to build disciplinary-specific background knowledge and learn more about topics specific to each academic discipline.



During module 5, teacher learners were introduced to the 4 E's (Moje, 2015) to provide a potential structure to their media literacy designs. Of the six teacher learners, only one referenced the 4 E's as a potential framework to use to design media literacy lessons. Thus, the majority of teacher learners provided background building opportunities using their previous instructional approaches while incorporating media literacy strategies.

**Theme 2: Explicit Media Literacy Strategy Instruction and Support.** All six teacher learners discussed the need to explicitly teach media literacy strategies and offer resources as support for students. Specifically, all six teachers discussed the importance of modeling specific strategies to students. Two of the six teachers (Aaron and Molly) repurposed resources from the professional development. Within their design, they incorporated the video titled Sort Fact from Fiction with Lateral Reading from the Stanford History Education Group's Civic Online Reasoning Curriculum, which was also viewed during module 2 of the professional development. Four of the six teacher learners (Jayne, Josephine, Kaye, and Penelope) discussed modeling search operators, an online search strategy discussed during module 1 of the professional development. Jayne specifically mentioned that she planned to model using quotation marks to perform web searches. Furthermore, the three science teacher learners discussed the need to scaffold the student research process including accessing, analyzing, and evaluating through graphic organizers. Likewise, all six teachers discussed offering individual support to students to find reliable information online. Therefore, teacher learners suggested that

content from the online professional development must be explicitly taught to students prior to asking them to engage with media literacy strategies.

**Theme 3: Student Application of Media Literacy Processes.** All six teacher learners designed lessons that bridged student-centered learning opportunities and application of media literacy concepts. Jayne's design instructed students to apply strategies to access online information and reflect about the information students consume. Similarly, the science teacher learners' design accessed online information by applying search strategies, analyzed and evaluated the information they consumed through critical reflection, and synthesized the information to form the content of a media composition. Within the social science teacher learners' design, students applied lateral reading to determine the credibility of sources to gather and synthesize information about historical figures and events. Therefore, all six teacher learners provided hands-on opportunities for students to apply media literacy processes that were presented through the online professional development.

**Theme 4: Media Products to Demonstrate Disciplinary Knowledge.** In modules 3 and 4 of the online professional development, teacher learners engaged in readings, watched videos, browsed lesson plans, and were provided resources related to the functionality of selected digital tools to focus on the topic of media creation. All six teacher learners' designs incorporated the concept of media creation presented within the course. They leveraged media creation for students to demonstrate their knowledge specific to the discipline. For example, Jayne's design invited students to create a video response through Flipgrid to demonstrate their interpretations of selected news articles.

Josephine and Penelope's design asked students to compose persuasive emails to be sent to their school district's nutrition office documenting the nutritional value of school lunches. Furthermore, during the think-aloud portion of the study, Josephine and Penelope discussed creating a social media campaign to bring awareness to the nutritional value of school lunches. However, the social media campaign was not implemented in the final design. Kaye's design focused on implementing a Netflix themed multimedia project using Google Slides. Within her design, student created a slideshow through Google Slides, and each slide represented an episode of a Netflix series focusing on an ecosystem assigned to each student. Further, Kaye offered an extension assignment that gave students an option to produce a video of their Netflix series for extra credit. Aaron and Molly's design invited students to create an infographic demonstrating their knowledge of historical figures and events. In these ways, each teacher learner leveraged media creation, which was discussed in the online professional development, for students to create media products that demonstrate their knowledge specific to their discipline.

### ***Case 1: English Language Arts***

The data from one English language arts teacher (Jayne) were analyzed as one case to address how English language arts teachers may apply the content from the online professional development to design media literacy instruction. Four themes emerged including Bridging Media Literacy Strategies and Content Knowledge, Direct Instruction and Modeling of Strategies, Promoting Student Autonomy, and Accessing and Presenting Online Information.

### **Theme 1: Bridging Media Literacy Strategies and Content Knowledge.**

During module 5, teacher learners were placed in their content area design team to collaboratively examine their content curricula to make connections with media literacy. Further, teacher learners were asked to brainstorm how media literacy strategies taught within the online professional development could be implemented into their instruction. To connect English language arts content knowledge and media literacy strategies, Jayne's media literacy design was aimed at bridging strategies to access online information and non-fiction text strategies. She explained that her students were familiar with Newsela, and she often related essential questions found in the English language arts curriculum to articles found in Newsela. She built upon her previous instructional approach with Newsela for students to access information from the open web to interpret and synthesize news sources related to English language arts concepts. For example, she explained her rationale for assigning students a text set in Newsela related to the human condition as well as finding an additional article from the open web,

I just want to know how do they locate the article that pairs with the Newsela article. They'll have a text set that they get to choose from, but for their second one, it's their choice and online exploration. Which non-fiction text features or strategies or reading strategies did you apply to select the second article? I'm hoping that they're going to go back and say, I took note of the article was like, I looked at, you know, it's a non-fiction article or it has a similar word of competition or it has similar word of failure or need to win something about

winning or you know, maybe they were both about the Olympics or something like that.

Additionally, she applied Internet search strategies and critical reflection taught within the course to her design. She encouraged students to critically reflect about the information they consumed from online sources including considering their own biases. For example, she planned to ask students to reflect about how the information in the news articles reflects or pushes back on their own beliefs. Thus, Jayne designed a lesson intended to expand upon her previous instructional practices by adding information from the online professional development such as accessing online information and critical reflection. She explained,

I'm just kind of letting them explore a little bit and start drawing their own conclusions about what's true, what's not true, what do they agree with, what do they disagree with? Then, trying to tease out and how it partners with the text that I'm providing to them since it does tie back to our curriculum.

**Theme 2: Direct Instruction and Modeling of Strategies.** As Jayne designed her media literacy lesson, she stressed the importance of explicitly teaching strategies to access online information. Explicit teaching of media literacy strategies was discussed during module 2. Explicit teaching strategies discussed in the online professional development implemented by Jayne included modeling quality internet searches, explaining the search process, and giving students a graphic organizer to frame their reflection about the search process. Likewise, she indicated the importance of explaining

critical reading processes and reflecting about the online information students consume.

She explained,

There may be a lot of modeling that has to happen first, and I may choose another topic that I model with that, so [students] understand how to use the Internet to find something that pertains to their article [selected from Newsela].

**Theme 3: Promoting Student Autonomy.** Jayne leveraged accessing online information strategies taught within the online professional development to design a lesson aimed at promoting student autonomy. Within her design, she instructed students to choose an article on a topic of their choice from Newsela. She explained,

In building my text set, I was going to be considering four areas. Previously, I chose concepts of home. I'm going to have my students choose. They'll be able to choose one of their [Newsela] texts, so it'll be jigsawed.

In addition to allowing students to select the article in which they engage using Newsela, students had the choice to present their findings in-person or through Flipgrid.

She explained,

Students will present portions of their articles through live presentations or through Flipgrid presentations if they prefer... They'll either have an opportunity to record or present live and the recordings we can always watch at a later date and then just make connections to the article.

Jayne promoted student autonomy using accessing online information strategies that were taught within the online professional development.

**Theme 4: Accessing and Presenting Online Information.** Jayne's lesson design leveraged content from the online professional development to access online information and present student findings digitally. As she designed her lesson, she discussed how students would access online information to compare information from an article from Newsela. She discussed the need for students to apply keywords and search operators for students to access information from the open web. Her design asked students to comprehend online information rather than applying specific media literacy-related evaluation strategies. Through accessing online information, students would synthesize their findings in a presentation to the class or through Flipgrid. Jayne's lesson design focused on gathering and comprehending online information to apply English language arts focused critical reading strategies to create a presentation. Thus, she leveraged information from the course to access and present online information.

### ***Case 2: Science***

The data from three science teachers (Josephine, Kaye, and Penelope) were analyzed as one case to address how science teachers may apply the content from the online professional development to design media literacy instruction. Three themes emerged including Constructivist Pedagogy, Embedded within Research, and Consideration of Publishing.

**Theme 1: Constructivist Pedagogy.** As Josephine, Kaye, and Penelope designed their media literacy lessons, they situated media literacy concepts within constructivist pedagogy. Although constructivist pedagogy was not an explicitly stated through a dedicated module in the online professional development, numerous readings, lesson

plans, and resources discussed the connection between media literacy, content area learning goals, and constructivist pedagogy. While they agreed that direct instruction and modeling specific strategies were necessary, most of their lessons centered around collaborative student application of media literacy strategies to address disciplinary topics. To promote direct instruction, Kaye described a previous lesson when she modeled to students how to access online images. She said,

So, I gave them a bunch of options, and they got it really quick. I gave them the free and fair use photos options and how to find images on Google that were available to them and how to check for credibility. We just went through the process, and they were fine.

Additionally, Josephine described modeling search operators to her class. She said,

I hope the search operators worked as well for you as they did in my classes. That is probably my favorite part of what we have learned in this course. It's such a useful takeaway. I modeled it with my students a couple of months ago, and I still observe them using it for background research.

However, the science teachers suggested that modeling and direct instruction were opportunities to scaffold student learning, and students would be creating knowledge collaboratively by conducting research within their lessons for most of the class time. Specific strategies that were brainstormed during the think-aloud portion of the study include accessing online images, explicit application of search operators, reflection and consideration of bias, fact checking websites, taking pictures to collect data, production of infographics to demonstrate knowledge, and video production as an



extension activity. Thus, all three science teachers employed constructivist pedagogy to situate content from the online professional development within their content instruction to design media literacy lessons.

**Theme 2: Embedded Within Research.** All three science teachers designed their media literacy lessons by embedding content from the professional development within student research projects. The three science teachers situated media literacy strategies to address real-world problems and phenomena through student research. Within all three science teachers' designs, they incorporated accessing online information to gather sources, analyzing and evaluating the credibility of the sources gathered by students, creating to demonstrate student findings from research, and reflecting about the research process. Specifically, Josephine and Penelope's designs incorporated student leveraging media production such as taking pictures and uploading pictures to a learning management system for students to collect data. Kaye's design focused on internet-based research where the students would access and evaluate information from the Internet, but she emphasized inviting students to present their findings in a creative yet relatable way. Thus, she incorporated media production into her design by asking students to create a series of images depicting different aspects of ecosystems in a Netflix-style image design. To further emphasize media production within her design, she offered an extension assignment that allowed students to create videos of their ecosystems for extra credit.

**Theme 3: Consideration of Publishing.** As the three science teachers designed their media literacy lessons, they considered how they could include an element of publishing to an outside audience. Media publishing was discussed during module 4 of

the online professional development. Science teacher learners considered leveraging web-based platforms such as social media to promote awareness. For example, Kaye mentioned,

You could also do a social media push or something like that, like an awareness push...

Penelope responded,

So, the students will be collecting data, seeing what lunch is being served every day for a week... So, [students are] making sure they are getting all of their macronutrients but also in a very healthy way. For their end product, I have written down social media campaign or letter to the school nutritionist arguing why what they're serving is not as healthy as it should be.

Additionally, Penelope considered promoting awareness of the nutritional value of school lunches by publishing to the student body. She said, "[Our school technology coach] has access to all of the TVs in the school because he played one of my posters for me. So, I'm sure if we poke him, he can play a clip [to promote awareness]."

In their final design, Josephine and Penelope leveraged concepts of publishing to an outside audience to write persuasive emails to the school district's nutrition office. However, the final emails were not mailed to the nutrition officials. Kaye's final design did not incorporate an aspect of publishing. However, as the science teacher learners designed their lessons, they considered how they could incorporate publishing to an outside audience.

### ***Case 3: Social Science***

The data from two social science teachers (Aaron and Molly) were analyzed as one case to address how social science teachers may apply the content from the online professional development to design media literacy instruction. Three themes emerged including Explicit Teaching of Media Literacy Concepts, (Critical) Media Consumption, and Representing Knowledge through Graphics.

**Theme 1: Explicit Teaching of Media Literacy Concepts.** As the social science teachers designed their media literacy lessons, they emphasized explicit teaching of content from the online professional development. As the focus of their designs were to challenge students to find credible online information, they discussed explicitly teaching lateral reading. To design a lesson for students related to lateral reading, Aaron and Molly leveraged materials provided to them within the online professional development. Aaron explained,

We [should do a] full day where we tell them [about lateral reading]. First, we show them, what is lateral reading? How does it work? Why is it important?

Then, we transition into some brief document or research analysis assignment that forces them to do lateral reading.... And I think we could use a lot of the stuff [the professional development instructor] has been providing us... Even some of the videos that he's shown us where they explain the differences between lateral and vertical reading. We could show them some of the stuff that was provided to us.

In addition to explicitly teaching students about lateral reading, Aaron incorporated a video from the online professional development focusing on performing reverse image

searches to determine the credibility of online images. Molly did not incorporate this video into her final design.

Additionally, Aaron and Molly discussed adding a creation activity for the students to synthesize their disciplinary-specific knowledge through an infographic. They discussed explicitly teaching the functionality of Piktochart, Adobe Spark, or Google Draw. In the final design, Aaron explicitly taught the students the functionality of Adobe Spark. Molly gave students choice as to which digital tool students used to create their infographics and did not provide direct instruction about the functionality of any specific digital media creation tools. Thus, the social science teacher learners emphasized explicit teaching of media literacy concepts within their design.

**Theme 2: (Critical) Media Consumption.** Aaron and Molly's design focused on accessing and evaluating online information. Within their design, they leveraged content and materials from the online professional development to provide hands-on opportunities for students to access and evaluate online information. In addition to showing a video about lateral reading, Molly incorporated an activity where students practiced lateral reading to determine the credibility of a given website. Thus, the learning goal of Molly's additional activity was to teach students to read laterally and think critically about the information they consume. Both Molly and Aaron repurposed PowerPoint slides from the online professional development that focused on accessing and evaluating online information as well as the importance of applying media literacy strategies inside and outside of school. Although both Aaron and Molly added a synthesizing and creating activity into their design, the primary focus of their media

literacy lessons was accessing, evaluating, and corroborating online information. Thus, Aaron and Molly leveraged both content and teaching resources from the online professional development to teach students to consume and evaluate online information.

**Theme 3: Representing Knowledge through Graphics.** Within both Aaron and Molly's design, they incorporated digital graphic creation activities to synthesize both the disciplinary knowledge from the information students found online as well as describe their accessing and evaluation process. In Aaron's creation activity, students synthesized the credible information they found online related to a famous scientist by creating an infographic using Adobe Spark. Similarly, Molly allowed students to use a digital graphic creation tool of their choice to create an infographic describing the online sources students found related to the Lewis and Clark Expedition. Further, students were asked to describe their online evaluation process within the infographic. Throughout the online professional development, teachers read scholarly articles which discussed the impact of digital graphic creation on student learning. Likewise, teacher learners created an infographic using Adobe Spark during week 2 of the online professional development. Thus, Aaron and Molly applied content from the online professional development to incorporate graphic creation assignments within their media literacy design.

### ***Summary***

The second research question addressed how teachers apply the content from online professional development on the instructional integration of media literacy to design media literacy instruction. Since content area teachers must draw from different forms of knowledge to design instruction including subject matter content knowledge,

pedagogical content knowledge, and process knowledge (Carney & Indrisano, 2013) and new media literacy outline specific skills and strategies to consume and produce media in Web 2.0 environments (Chen et al., 2011; Lin et al., 2013), the expected pattern was that teacher learners will apply knowledge relevant to bridging disciplinary-specific instruction and knowledge of new media literacy to integrate media literacy into their instruction.

Data were first analyzed as a collective case. The findings from the collective case suggested that the teacher learners applied the content from the online professional development to build disciplinary-specific background knowledge relevant to their academic discipline. Additionally, teacher learners applied the content from the online professional development to offer explicit media literacy instruction to their students. Teacher learners emphasized modeling specific strategies, repurposing resources from the online professional development, and offering explicit media literacy support to students. Further, teacher learners incorporated media creation into their designs for students to demonstrate knowledge relevant to their academic discipline including emails, infographics, short video responses, and consideration of a social media campaign. Thus, when generalizing across all teacher learners, the expected pattern was accurate in that teacher learners applied the content from the online professional development through subject matter content knowledge such as addressing disciplinary-specific concepts, pedagogical content knowledge such as incorporating modeling and student-centered instructional approaches, process knowledge (Carney & Indrisano, 2013) such as instructing students to engage with media literacy strategies for disciplinary-specific

purposes, and new media literacy (Chen et al., 2011; Lin et al., 2013) to design media literacy instruction.

Data were separated into three cases representing each content area to examine how teacher learners within content area apply the content from online professional development on the instructional integration of media literacy to design media literacy instruction. The English language arts teacher learner applied content from the online professional development to design media literacy instruction by bridging media literacy strategies and content knowledge, direct instruction and modeling of strategies, promoting student autonomy, and accessing and presenting online information. Science teacher learners applied content from the online professional development to design media literacy instruction by employing constructivist pedagogy, embedding media literacy strategies and concepts within research related to their academic discipline, and considering incorporating an element of publishing to an outside audience. Social science teacher learners applied content from the online professional development to design media literacy instruction by explicit teaching of media literacy concepts, accessing and evaluating online media using specific media literacy strategies, and instructing the students to represent their content knowledge through graphics. Thus, when data were separated into content area cases, findings suggested that all content areas matched the pattern of applying content from the online professional development to promote subject matter content knowledge, pedagogical content knowledge, process knowledge (Carney & Indrisano, 2013), and new media literacy (Chen et al., 2011; Lin et al., 2013) to design media literacy instruction.

**RQ3: How do teachers' perceptions of their competency with the instructional integration of media literacy change when they participate in online professional development about integrating media literacy into their content instruction?**

The third research question addressed the change in teachers' perceptions of their competency with the instructional integration of media literacy when they participate in an online professional development. Data were coded inductively (Saldana, 2015) through a simple time-series analysis technique (Yin, 2018) to examine the teachers' application of content from the online professional development. Initial codes included Barriers, Tools, Context, Media Literacy Strategies, Instructional Approach, Attitude, Competence, Frequency, and Support. The data was first analyzed as a collective case to examine the common trends across all teacher learners. Then, data were separated into content area cases to examine media literacy integration for each content area.

***The Collective Case***

Six themes emerged from the data for the collective case including Curriculum Connections, Acquisition of Media Literacy Language, Increased Use of Open Web, Increased Emphasis on Media Evaluation, Little or No Change in Media Creation Implementation, and Fear of Implementing Publishing.

**Theme 1: Curriculum Connections.** As the online professional development progressed, all six teacher learners indicated increased competence with finding media literacy connections to their content curriculum. Before the professional development began, teacher learners suggested they siloed accessing, analyzing, and evaluating within research, and four teacher learners discussed reaching out to their school-based librarians



to support them with teaching accessing, analyzing, and evaluating. Similarly, teacher learners suggested they viewed creating and publishing through a technology lens. All six teacher learners described the digital tools they used for students to complete digital products to demonstrate their learning. One teacher learner indicated she reached out to her school-based technology coach for advice about implementing media creation into her instruction.

During the online professional development, teacher learners stressed the need to incorporate disciplinary-specific background building opportunities to achieve greater competence integrating media literacy into content instruction. Specifically, Josephine expressed her concern with the lack of student background knowledge, which she believed stemmed from emergency distance learning the prior school year. As teacher learners completed four short media literacy lessons throughout the course before they implemented their final lesson, they sometimes implemented media literacy as the focus of their lessons as they explicitly taught accessing and evaluating strategies. However, they also implemented media literacy strategies to enhance content instruction. Teacher learners demonstrated increased competence with providing scaffolding opportunities related to media literacy. For example, Jayne often incorporated graphic organizers to structure Internet searches. Likewise, all teacher learners demonstrated competence with modeling specific media literacy strategies related to accessing, analyzing, and evaluating online information. Teachers indicated their competence providing constructivist learning opportunities for students to apply media literacy strategies and addressed building disciplinary-specific background knowledge within their media literacy instruction.

Typically, teacher learners embedded multiple media literacy strategies in a specific continuum to address authentic disciplinary topics. Thus, teacher learners modeled and implemented accessing before evaluating and ended with creating to gather further information and demonstrate knowledge related to their curriculums. Furthermore, teacher learners increasingly used media literacy strategies to offer choice to students about researching disciplinary topics and digital tool selection to demonstrate student knowledge.

After the course concluded, teachers suggested they had increased competence with implementing media literacy into their content instruction. They indicated media literacy promotes student autonomy and can be used to further explore authentic, relatable, and real-world problems through a disciplinary lens. Therefore, their perceived competency grew from a media literacy approach that siloed accessing, analyzing, and evaluating into a librarian-centered research category and creating and publishing into a technology focused silo to addressing connections between media literacy and their content curriculum.

**Theme 2: Acquisition of Media Literacy Language.** At the conclusion of the online professional development, all six teacher learners discussed their increased competency with using specific media literacy vocabulary in their instruction. They indicated they became more articulate about media literacy concepts and possessed greater confidence in assisting students with applying media literacy concepts to content instruction. Further, they suggested they interacted with students and communicated with them about disciplinary-specific media literacy processes more frequently. Aaron

explained that the course increased his competency with articulating media literacy concepts which enhanced his instruction. He said,

I've gotten to the point because I understand all these new details about how to be more analytical and specific and concrete about. It's definitely gotten where I'm able to give more direct instruction and give specific directions you know. Go here. Use this. Make sure you justify. I can be more direct and straight to the point. Go find information about Galileo. Go to Wikipedia and Google. Very deep and detailed, and having a very specific things I'm looking for. I think it's just definitely gotten much more specific in terms of I can tell the kids exactly what I'm looking for.

Molly echoed Aaron by explaining that her competence with implementing media literacy language into her instruction changed because she is now teaching media literacy directly. Aside from Aaron and Molly, the other four teacher learners indicated the course increased their awareness of media literacy concepts and how they related to the content instruction, which in turn made them more articulate when communicating with students through whole-group direct instruction or individually about topics related to media literacy.

**Theme 3: Increased Use of Open Web.** Before the professional development, four of the six teacher learners expressed discomfort with allowing students to access online information through Internet searches. All six of the teacher learners indicated their competency with providing links to students through Schoology or providing online media through digital applications such as EdPuzzle or Nearpod. However, four of the six

teachers did not promote using the open web in their classroom, and two of the six teachers indicated they only integrate the open web into instruction occasionally. Jayne suggested that she does not value or incorporate searching the Internet into her instruction. When asked about incorporating accessing online information into instruction, she said, “I don’t do a whole lot of just random Google searches. I’m not a huge fan of just randomly searching for them, especially high school students... I’m hesitant about random searches.”

As the course progressed, teacher learners implemented new accessing and evaluating strategies within content instruction using the open web. For example, Jayne implemented a lesson where students found quotes or poems that related to their lives. Likewise, the science teacher learners implemented lessons on accessing content where students applied search operators to find disciplinary-specific information on the open web. Molly implemented a lesson on accessing content where students performed Internet searches to find information about Latin America, and Aaron assigned vocabulary related to media literacy for students to define using Internet searches. As the course progressed, teachers demonstrated their competency with providing opportunities for structured Internet searches and increasingly allowed students to build background knowledge using the open web. While teachers continued to demonstrate their competency of accessing and evaluating online information, four of the six teacher learners explicitly discussed evaluation strategies less frequently with their students after the module on media evaluation concluded.

After the conclusion of the professional development, all six teacher learners suggested they have increased the use of the open web in their instruction but still sometimes provide online resources to their students when necessary. Likewise, four of the six teacher learners suggested they see increased value in implementing opportunities for students to access online information within content instruction. Specifically, Jayne, who strongly opposed allowing students to use the open web before the online professional development, explained that she felt empowered to allow students to use the open web at the conclusion of the online professional development.

**Theme 4: Increased Emphasis on Media Evaluation.** Before the professional development began, teachers indicated they were somewhat competent with implementing media analysis, evaluation, and reflection. Four of the six teacher learners described instances where they collaborated with their school-based librarians to implement lessons about accessing, evaluating, and reflecting about online sources. Likewise, four of the six teacher learners described media evaluation as library-focused lessons incorporating online databases and academic journals rather than gathering information through Internet searches. Three of the six teachers explicitly mentioned detecting bias in news as a form of media evaluation.

As the online professional development progressed, teacher learners suggested they had increased competence with implementing systematic approaches to evaluating disciplinary-specific online texts into their instruction. For example, three of the six teacher learners modeled lateral reading to their students and gave students opportunities for hands-on practice with lateral reading. Two teachers had discussions with their

classes relating to critical questions when evaluating online information. One teacher learner did not implement an evaluating online information lesson during the online professional development. Additionally, all six teacher learners expressed surprise that they could use Wikipedia as a reliable source to begin research. Teachers learners indicated increased competence with leveraging the affordances of Wikipedia for instructional purposes.

After the online professional development concluded, teacher learners emphasized checking the credibility of online information, acknowledged the affordances of Wikipedia, and implemented evaluation strategies into their instruction. Three of the six teacher learners explained they have increased competence with incorporating lateral reading into content lessons specifically. Teacher learners' perceptions about implementing evaluating online information evolved from library-focused lessons to an approach that can seamlessly integrate into their content instruction. Therefore, teacher learners' perceived competency with implementing evaluating online information strategies and lessons into their instruction increased.

**Theme 5: Little or No Change in Media Creation Implementation.** Before the online professional development began, Five of the six teacher learners indicated they had little or no competency with integrating media creation into their instruction. One teacher learner, Kaye, suggested that she has above average competency in integrating media creation into her instruction. She explained that she integrated more media creation during the previous year of emergency distance learning and that experience increased her competency with integrating media creation. All of the six teacher learners suggested

when they implement media creation, they do for students to demonstrate their knowledge.

As the professional development progressed, teachers who had previous experience creating personal or instructional media were more competent with incorporating media creation into their instruction compared to others who lacked this experience. Throughout the professional development, teachers were somewhat competent with incorporating media creation into their instruction. However, they typically implemented digital tools that were familiar to them. For example, before the professional development began, Jayne discussed how she used Flipgrid for students to record video responses. In her final media literacy lesson, she incorporated Flipgrid within a similar instructional approach. Furthermore, opportunities for students to create media were limited. Three of the six teacher learners indicated that time is a barrier preventing them from implementing larger multi-day media creation activities, such as video production. For five of the six teachers, media creation was limited to students synthesizing online information by creating infographics. One of the six teachers incorporated video production as an optional extension activity.

After the online professional development concluded, all six of the teacher learners indicated they were somewhat competent with implementing media creation into their instruction. While five of the six teachers expressed interest in implementing video production for students to demonstrate their learning, they suggested they were hesitant to do so due to a lack of functional knowledge of digital tools. Likewise, two of the six teacher learners pointed to time as a barrier and they do not typically have class time to

devote to media creation. Thus, all teacher learners had little or no change in their perceived competency with integrating media creation into their instruction.

**Theme 6: Fear of Implementing Publishing.** Before the professional development began, five of the six teachers indicated they were not competent with integrating media publishing into their instruction. While Jayne discussed creating the literary magazine for the school audience, she indicated that she was hesitant to implement lessons for students to publish to an audience outside of the school community. Additionally, she explained that school censorship was a concern. The five teacher learners who indicated they were not competent with implementing publishing into their instruction explained they did not know their boundaries to do so. Furthermore, they feared reprimand from their school district and community pushback. They indicated they lacked experience with incorporating publishing and lack confidence to do so.

As the online professional development progressed, teachers were competent with bridging real-world, disciplinary problems with media literacy; however, they were not willing to incorporate media publishing to an outside audience. Throughout the online professional development, they expressed interest and reflected about how to do so. However, the professional development only presented publishing from a theoretical standpoint and did not require teacher learners to design instruction that incorporated an element of publishing. Two of the six teachers incorporated a simulated element of publishing as their students were required to write emails to their school district nutrition officials. However, the emails were not actually sent.



After the professional development concluded, teacher learners indicated they are not comfortable with incorporating online publishing into their instruction due to time constraints, fear of offending their school district, lack societal knowledge, and Internet safety concerns. However, they expressed interest in incorporating an element of publishing into their instruction in the future. Likewise, five of the six teacher learners suggested they have a greater awareness of the benefits of implementing publishing online. One teacher learner indicated she did not see the value in implement publishing online. Thus, teacher learners' perceived competency with integrating publishing into their instruction did not change throughout the professional development.

### ***Summary***

The third research question addressed how teachers' perceptions of their competency with the instructional integration of media literacy changes after participating in online professional development designing for media literacy in content instruction. Data were open coded (Saldana, 2015) using a time-series analysis approach (Yin, 2018) over seven intervals representing topics from the online professional development.

Data were analyzed as a collective case. The findings from the collective case suggested that the teacher learners' perceptions of their competency changed with finding connections to their content curriculum, acquiring media literacy language and vocabulary, implementing the open web, and integrating media evaluation into instruction. For example, teacher learners' perceived competency grew from approaching media literacy concepts siloed within library-centered and technology-centered to

addressing how media literacy concepts directly relate to and integrate within their content curriculum. Likewise, teacher learners felt they became more articulate about media literacy concepts, possessed greater confidence when discussing media literacy with students, and interacted with students more effectively regarding media literacy concepts. Further, teacher learners found increased value in implementing the open web and did so more frequently. Also, teacher learners increasingly emphasized online analysis and evaluation techniques including asking critical questions and lateral reading. Thus, teacher learners' competency increased with making curriculum connections, acquiring media literacy language, and accessing and evaluating online information.

However, their perceptions of their competency did not change with implementing media creation and publishing. Throughout the study, teacher learners suggested they felt somewhat competent with implementing media creation and typically integrated curating media for slideshows and creating infographics with some opportunities for students to create videos. However, some teacher learners indicated time was a barrier for implementing media creation into content instruction. Likewise, throughout the online professional development, teacher learners expressed fear over implementing publishing into content instruction. They felt they were not competent with incorporating publishing online into their instruction due to time constraints, fear of offending their school district, lack societal knowledge, and Internet safety concerns. Thus, as a collective, teacher learners' competency with creation and publishing media did not change throughout the online professional development.

The third research question addressed how teachers' perceptions of their competency with the instructional integration of media literacy changed after participating in online professional development designing for media literacy in content instruction. Across all cases, teacher learners' perceptions of their competency with implementing accessing online information changed. Also, all teacher learners' perception of their competency to integrate media literacy concepts into their instruction changed. Social science teachers and one science teacher indicated their competency with integrating analyzing and evaluating online information changed. Similarly, social science teachers and one science teacher also indicated their competency with implementing creating media changed. None of the teacher learners' competency with integrating publishing into instruction changed.

**RQ4: How do teachers' perceptions of their own media literacy competency change when they participate in online professional development designing for media literacy in content instruction?**

The fourth research question addressed the change in teachers' perceptions of their competency with their own media literacy when they participate in an online professional development. Data was coded inductively (Saldana, 2015) through a simple time-series analysis technique (Yin, 2018). Initial codes included Competence, Media Literacy Strategy, Digital Tools, Attitude, Social Media, and Reflection. The data were first analyzed as a collective case to examine the common trends across all teacher learners. Then, data were separated into content area cases to examine media literacy competency for each content area.

### *The Collective Case*

The data from all six teacher learners were analyzed as one case to examine the change in teachers' perceptions of their competency with their own media literacy when they participate in an online professional development. Two themes emerged from the data for the collective case including Increased Awareness and Skepticism, Creation and Publishing.

**Theme 1: Increased Awareness and Skepticism.** Before the professional development began, teacher learners suggested they were generally competent with accessing online information. They indicated they were passive Internet users who engaged with online information through Google Searches and school provided online information platforms. Four of the six teacher learners suggested they consult other online sources if they questioned an online text's credibility. They felt they reflected about media for personal and civic reasons. Personal reasons included acknowledging evolving technology trends and indicating an openness to learn more about media literacy. Jayne discussed her awareness of the shift in literacy practices. She said,

I would say I like to read online media, certainly from my devices. It's not an irregularity, but we will think 'Okay, we've been on our phones, and we're reading media.' That impacts life. I don't think that's a bad thing either.

Additionally, teacher learners felt they needed more knowledge of media literacy.

Penelope said, "I don't think I have a full understanding of all of the facets of media literacy. So, I can't ask [questions] or add to a list of [media literacy competencies] because I don't know yet." In addition to personal reflection, teacher learners reflected

about media for civic or societal reasons as well. They indicated they reflected about fear of media addiction, media bias, amount of screen time, news and information, social media's impact on civility and family relationships, and the appropriateness of posting information online.

As the online professional development progressed, all of the six teacher learners expressed they felt they had increased skepticism and possessed greater awareness of the media literacy concepts. For example, Penelope mentioned, "I am definitely more mindful of what media I am consuming (I use several platforms of media such as Facebook, Instagram, news widgets, YouTube, YouTubeTV, and other non-mainstream platforms)." Similarly, Jayne said, "I've noticed experiences where I hear about something in real life and choose to research differently online due to what I am learning about in this class." Further, three of the six teacher learners indicated they explicitly applied lateral reading in their personal life when they questioned the credibility of online content. Thus, teacher learners became more skeptical of the information they consumed online and possessed a greater awareness of media literacy concepts.

After the online professional development concluded, teacher learners explained they had increased openness to diverse viewpoints, especially on social media, stemming from increased awareness of media literacy concepts. Further, their skepticism increased, especially when engaging with news and political web sites. Likewise, they found great value in applying media literacy concepts for themselves and students. All of the six teacher learners felt they made great gains in their ability to evaluate online information, and three of the six explicitly applied lateral reading. Further, they could connect their

background knowledge of media literacy to both personal and instructional situations.

Penelope said,

I really think about the social media aspect of media literacy, but then when I have my teacher hat on, I think about all the other things that comes with media literacy. So, if I can apply that to my personal life, I think that would be great. I just realized that I very much divide the two. When I'm in the classroom with the kids versus me on social media as I'm scrolling through my phone or my tablet. I felt like they were two very different things, but they are really not two different things.

Thus, teacher learners felt their skepticism of the information they consumed online as well as their awareness of media literacy concepts increased.

**Theme 2: Creation and Publishing.** Before the professional development began, teacher learners had limited competency with creating media beyond basic creation skills. For example, teacher learners indicated they were not competent with creating multimedia. Kaye mentioned that she learned the basic functionality of WeVideo, but “cannot do anything fancy.” Additionally, she mentioned that last year’s distance learning environment gave her greater competency with creating media. Furthermore, teacher learners only published on social media for personal purposes. Two of the six teacher learners indicated they do not use social media at all. The four teacher learners who use social media claimed they only do so to share personal photographs and information with a small group of people, such as family and friends. Thus, teacher

learners associated media creation with the functionality of digital tools and publishing with social media before the professional development began.

As the professional development progressed, teacher learners indicated they were competent with creating basic videos and infographics to enhance instruction, give examples of multimodal assignments, and offer an alternative to in-person lecture. During module 4, teacher learners were tasked with creating media to be implemented into their instruction. Jayne and Aaron created videos of themselves lecturing for students to view. Thus, Jayne and Aaron applied basic video recording techniques with no editing. The other four teacher learners created graphics to supplement and enhance their instruction, and for student reference. Josephine created a graphic that including an embedded video in addition to images related to viruses. Kaye created an infographic outlining the steps of an assignment for students to create a simulated Instagram post which allowed students to consider platform, audience, and multimedia. Penelope created an infographic that explained the process of reading scientific journals. Additionally, through the professional development discussion boards, teacher learners indicated they do not publish content online or do so through social media to share personal media with friends and family.

After the professional development concluded, teacher learners' competency with creating and publishing media in their personal life did not change. The teacher learners who published on social media did so for personal rather than civic reasons to a limited audience such as family or friends. Further, Molly, who sometimes shared political information on social media, indicated she now publishes less after taking the online

professional development. Similarly, Penelope explained that she did not see value in publishing because she does not intend to have an online following and only publishes for friends and family. Jayne suggested she was comfortable with media creation but does not enjoy it. She said,

I don't really create. I mean I text. I don't like social media. I don't feel like I'm creating a lot of online stuff personally. It's just not my thing. It's not because I'm not comfortable. I just choose to spend my time doing other stuff.

Thus, teacher learners' competency with creating and publishing media did not change.

### ***Summary***

The fourth research question addressed how teachers' perceptions of their competency with their own media literacy change after participating in online professional development designing for media literacy in content instruction. Data were open coded (Saldana, 2015) using a time-series analysis approach (Yin, 2018) over three intervals representing before, during, and after the professional development.

Data were analyzed as a collective case. The findings from the collective case suggested that the teacher learners' perceptions of their competency with accessing and evaluating information changed by acquiring heightened awareness of media literacy concepts as well as increased skepticism of the information they consume. Conversely, teacher learners' perceptions of their competency to create and publish media did not change. Teacher learners felt they were somewhat competent with creating media and not competent with publishing media to an outside audience throughout the online professional development.



All teacher learners indicated their competency with accessing and evaluating online information changed. The English language arts and science teacher learners indicated their competency with creating and publishing media did not change. Only the social science teachers indicated their competency with creating and publishing media changed.

## Chapter Five

The purpose of the present study was to examine the differences in high school teachers' media literacy instructional integration across content areas to address the specialized knowledge and discourses of their disciplines after participating in an online media literacy professional development, how high school teachers applied content from the online professional development to design media literacy lessons, and the change in the perceptions of their competency with media literacy integration as well as their own media literacy after participating in the online professional development. Six high school teacher learners (1 English language arts, 3 science, and 2 social science) participated in a 9-week online professional development encompassing both synchronous and asynchronous modules. The first four learning modules were informed by the AACRA framework (Hobbs, 2010) as well as the refined framework of new media literacy (Lin et al., 2013). The remainder of the modules were informed by disciplinary literacy (Goldman et al., 2016; Moje, 2015; Shanahan & Shanahan, 2012) and collaborative design practices (Voogt et al., 2015) as teacher learners designed instruction connecting media literacy skill and strategies to their content area curriculum. To enhance the quality of the professional development, Elliot's (2017) six qualities of professional development were incorporated including interaction, collaboration, interest-driven and differentiation, ongoing, providing resources, and classroom implementation.

This study was designed using multiple case study methodology. The six teacher learners participated in semi-structured interviews before the professional development

began and once it concluded. Additionally, the teacher learners were placed into design teams during modules 6 and 7 to brainstorm and design their media literacy lessons. As they brainstormed and designed their lessons, they participated in the think-aloud portion of the study by explaining their rationale for their design decisions. Additional data for triangulation included media literacy reflection journals, discussion boards, media compositions, planning resources, and observation field notes.

### **Summary of Findings**

Data analysis suggested that all of the teacher learners incorporated media literacy strategies and concepts to examine real-world topics and phenomena. Likewise, all of the teacher learners emphasized adding an element of media evaluation into their instruction. However, each content area differed in the perspective from which they integrated media literacy to privilege the specific knowledge, ways of making meaning, and discourses for their specific discipline. Additionally, teacher learners applied the content from the online professional development to promote subject matter content knowledge, pedagogical content knowledge, process knowledge (Carney & Indrisano, 2013), and new media literacy (Lin et al., 2013) to design media literacy instruction. While all teacher learners designed lessons incorporating student-centered, constructivist pedagogy, science and social science teachers embedded media literacy into instruction focused specifically on student research.

After the conclusion of the online professional development, teacher learners suggested they were more competent with finding connections between media literacy and their content area curricula. Likewise, they indicated they acquired media literacy

language and terminology that allowed them to communicate with students more directly and effectively about media literacy. Teacher learners felt they increased the use of open web and emphasized media evaluation in their instruction. Only the social science teacher learners indicated their competency with integrating media creation changed. All teacher learners indicated their competency with integrating publishing did not change. As for teacher learners' perceptions of the own competency with media literacy, they felt they had a heightened awareness of media literacy concepts and were increasingly skeptical of the information they consumed online. Thus, all teacher learners indicated their competency with accessing and evaluating online information changed.

## **Discussion**

The findings from this study outline a disciplinary-focused instructional approach toward media literacy integration. This study provides examples of teachers across content areas who designed lessons by situating media literacy concepts within their specific disciplinary culture. Thus, a disciplinary-focused instructional approach to media literacy integration was demonstrated through the teachers' design and implementation of media literacy lessons. These implemented media literacy lessons gave insight to the interaction between content area curricula and media literacy skills and strategies. Figure 6 displays an example of the interaction between content area learning goals and media literacy skills and strategies across disciplines. Specifically, it demonstrates how a fundamental concept related to media literacy (i.e., considering the author of a media message) addresses the specialized knowledge and discourses of a given discipline.

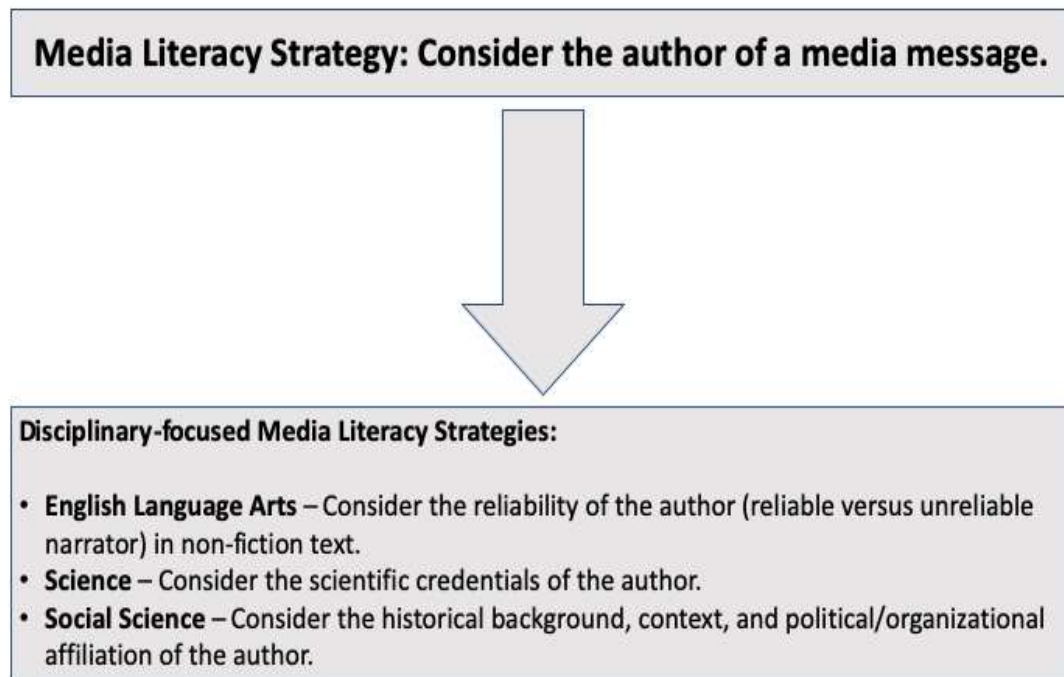


Figure 6

*Example of the Interaction Between Content Area Curricula and Media Literacy*

Relatedly, teacher learners applied content from the online professional development to build disciplinary-specific background knowledge, offer explicit media literacy instruction (i.e., modeling, repurposing resources, scaffolding), and incorporate media creation for students to demonstrate their knowledge. Findings supported that teachers applied the content from the online professional development to promote subject matter content knowledge, pedagogical content knowledge, process knowledge (Carney & Indrisano, 2013), and new media literacy (Lin et al., 2013) to design media literacy

instruction. Thus, media literacy education promoted critical thinking skills, constructivist teaching practices, and real-world problem-solving opportunities (Hobbs, 2011; Redmond, 2013, Westbrook, 2011). Considering the interaction between content area learning goals and media literacy skills and strategies as well as the necessary knowledge needed to integrate media literacy instruction, a rudimentary framework for designing and implementing media literacy instruction may have emerged from teacher learners' designs.

### ***The Framework of Disciplinary Media Literacy***

The Framework of Disciplinary Media Literacy emerged from the teacher learners' lesson designs. This framework aligns with Huguet et al.'s (2019) assertion that an integrated approach to media literacy education presents media literacy as a worldview rather than merely a skillset. Likewise, it reflects that teacher learners address the specialized knowledge and discourses of their disciplines by incorporating media literacy concepts to privilege real-world knowledge, techniques for making meaning, and language that bridges content area learning goals and media literacy. As Goldman et al. (2016) outlined the specific knowledge, inquiry practices, strategies of reasoning, forms of representation, types of text, and language structures privileged by each discipline, the Framework of Disciplinary Media Literacy may further clarify connections between content curricula and media literacy by illuminating the nuances of each academic discipline. As this study presents disciplines as a culture, the Framework of Disciplinary Media Literacy may reflect the structure of the interaction between disciplinary culture and media literacy instructional lenses. Thus, the Framework of Disciplinary Media

Literacy promotes approaching media literacy as a cognitive tool situated within a disciplinary culture and may further the implementation of media literacy approaches in the content classroom.

While numerous frameworks related to media literacy education have been introduced, such as the CRAAP test (Blakeslee, 2004), WWWDOT framework (Zhang & Duke, 2011; Zhang et al., 2011), and the three-tiered framework (Forzani, 2019), the vast majority of media literacy frameworks and models focus on student evaluation and creation without incorporating teacher pedagogy. Regardless of content area, teacher learners leveraged media consumption, analysis, and evaluation to build student background knowledge of disciplinary concepts. Additionally, teachers explicitly taught media literacy strategies, such as search operators, critical questions, lateral reading, and functionality of technology. Then, they gave students hands-on experience applying media literacy strategies within a disciplinary context. Finally, students created products to demonstrate their disciplinary knowledge. This series of instructional decisions could be the start of a basic framework for a disciplinary-focused approach to integrating media literacy into content instruction. The Framework of Disciplinary Media Literacy is intended to provide teachers with a structure for an integrated approach to media literacy instruction. It emphasizes designing and delivering inquiry-based instruction bridging disciplinary-specific topics and media literacy and is intended for teachers to integrate media literacy practices to be transferred across academic disciplines and settings. Additionally, the Framework of Disciplinary Media Literacy could be applied to designing impactful teacher learning opportunities related to an integrated approach for

media literacy instruction. Thus, the Framework of Disciplinary Media Literacy is intended to provide structure to delivering media literacy instruction across all content areas. Figure 7 displays the Framework of Disciplinary Media Literacy.

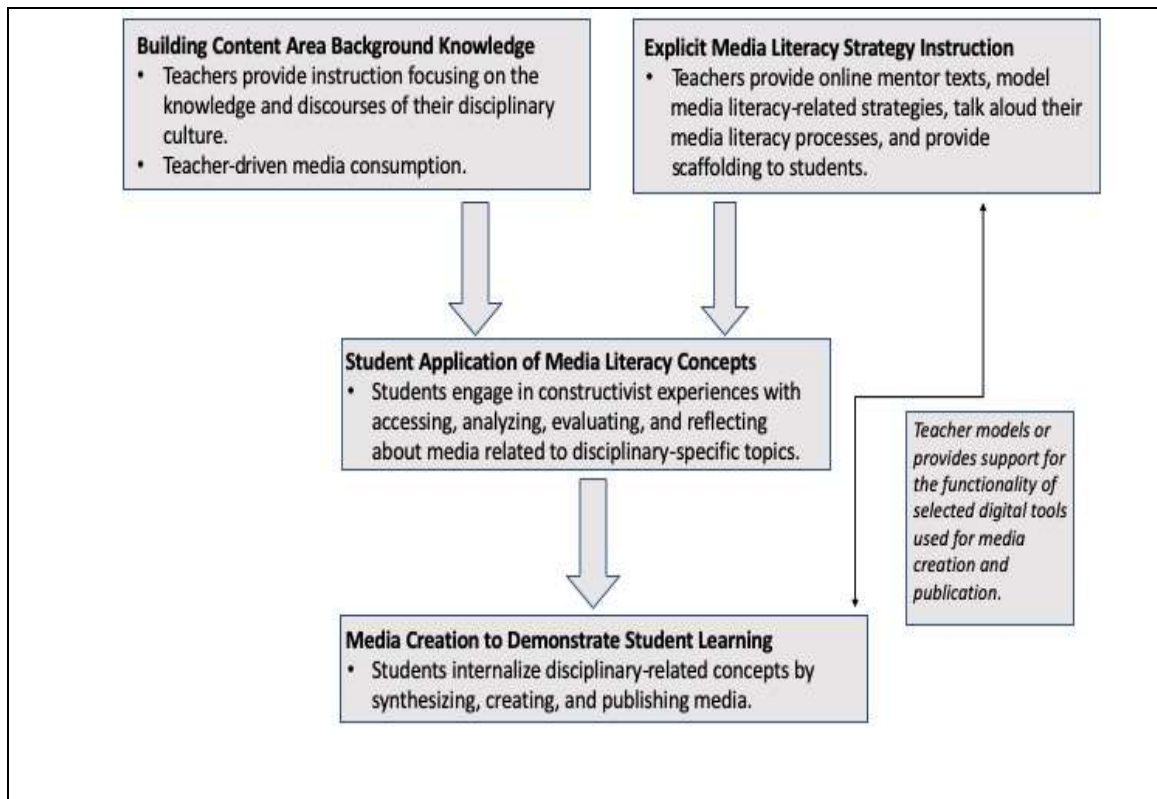


Figure 7

*The Framework of Disciplinary Media Literacy*



The components of the Framework of Disciplinary Media Literacy include building content area background knowledge, explicit media literacy strategy instruction, student application of media literacy concepts, and media creation to demonstrate student learning. The Framework of Disciplinary Media Literacy is intended for teachers to design instruction at the intersection of their content curricula and media literacy skills and strategies. The following sections describe each component of the Framework of Disciplinary Media Literacy.

**Building Content Area Background Knowledge.** To build content area background knowledge, teachers provide instruction to students focusing on the knowledge and discourses of their disciplinary culture. In this component, media literacy concepts are applied through teacher-driven media consumption. Specifically, teachers present disciplinary-specific videos, provide readings, and engage students using interactive multimedia aimed to build student background knowledge.

This component is supported by Carney and Indrisano's (2013) assertion that teachers must apply subject matter content knowledge to incorporate disciplinary literacy practices into their classroom. All of the teacher learners in this study built content area background knowledge to integrate media literacy concepts into their instruction. For example, Jayne taught students non-fiction text strategies and content literacy strategies for students to engage with media. Josephine, Kaye, and Penelope presented slides and videos to their classes as a whole group well as provided resources through Schoology to build content area background knowledge related to macromolecules, nutrients, and ecosystems. Likewise, Aaron and Molly provided content area background information

(e.g., famous scientists and Lewis and Clark) through slideshow presentations, content area background readings, and resources shared through Schoology. This component of the Framework of Disciplinary Media Literacy encourages teachers to provide media to students to build their content area background knowledge.

**Explicit Media Literacy Strategy Instruction.** Once teachers have taught students disciplinary-specific knowledge and discourses, they can apply the second component of the Framework of Disciplinary Media Literacy. In this component, teachers explicitly teach media literacy concepts and provide examples of media literacy language and strategies. This component is supported by Pilgrim et al.'s (2017) suggestion to explicitly teach strategies related to media literacy such as providing online mentor texts, modeling media literacy-related strategies, talking aloud thinking processes while modeling media literacy-related strategies, and providing scaffolding for media literacy-related strategies through additional resources and classroom discussion. Explicitly teaching media literacy concepts prepares students to gain hands-on practice applying media literacy concepts for disciplinary-specific purposes. However, it should be noted that this component cannot be effectively implemented without the teachers acquiring the specialized knowledge and discourses related to media literacy provided through impactful teacher learning experiences.

Explicit media literacy strategy instruction aligns with Carney and Indrisano's (2013) assertion that teachers must apply pedagogical content knowledge to incorporate disciplinary literacy practices into their instruction. This component stresses that teachers apply pedagogical content knowledge to address content learning goals through

pedagogical practices aligning with media literacy strategies. For example, Jayne modeled search strategies to her students. Kaye explained that she modeled lateral reading to her class and talked aloud her evaluation process. Josephine and Penelope modeled search strategies as well as critical questions when evaluating online information. Likewise, both Aaron and Molly presented the strategy of lateral reading through a slide deck presentation and video that was repurposed from the online professional development. This component of the Framework of Disciplinary Media Literacy encourages teachers to provide explicit instruction of media literacy strategies.

**Student Application of Media Literacy Concepts.** After teachers have explicitly taught media literacy strategies, students must apply media literacy concepts to address the specialized knowledge and discourses of the discipline. Teachers empower students to access, analyze, evaluate, and reflect about media while offering individualized support. Within this component, students may work individually or collaboratively to promote constructivist learning opportunities bridging media literacy and the disciplinary culture.

This component aligns with Carney and Indrisano's (2013) assertion that teachers must apply process knowledge to incorporate disciplinary literacy practices into their instruction. For example, Jayne instructed students to access online information by searching the open web to find an online text that aligned with a selected article from Newsela. Students in Josephine and Penelope's classes accessed online information by searching the open web and online databases. Students also evaluated online information using critical questions. Similarly, Kaye's students accessed online information and employed lateral reading to determine its credibility. Aaron and Molly instructed students

to practice lateral reading through an assignment titled Lateral Reading Versus Vertical Reading adapted from the Stanford History Education Group's Civic Online Reasoning Curriculum. Then, their students applied lateral reading to complete a disciplinary-focused assignment. In this component of the Framework of Disciplinary Media Literacy, student gain hands-on practice with applying specific media literacy strategies to address specialized knowledge and discourses within the discipline. Thus, this component focuses on the processes of applying media literacy strategies intended to be transferred across disciplinary settings.

**Media Creation to Demonstrate Student Learning.** In the final component of the Framework of Disciplinary Media Literacy, students synthesize, create, and potentially publish media to demonstrate their learning. Additionally, this component connects to Explicit Media Literacy Strategy Instruction as the teacher should model the functionality of selected digital tools used for students to create media. This component is supported by Hobbs (2017) who explained that students internalize content knowledge when they create media.

All teacher learners incorporated a component of media creation for students to demonstrate their learning. For example, Jayne allowed students to choose between creating a short video response using Flipgrid or present their synthesis of their selected articles in person. Josephine and Penelope instructed students to craft emails to their school district nutrition office based on student research incorporating multiple forms of data. Kaye's students completed a slide deck representing each episode of a Netflix series focusing on a different element of an ecosystem. Additionally, she allowed students to

create a video of an episode of their Netflix series for extra credit. Aaron and Molly's students created infographics to synthesize disciplinary-specific information. Since only Aaron and Molly felt their competency with integrating media creation increased, and none of the teacher learners were willing to incorporate media publishing into their instruction, effective teacher learning opportunities to enhance teachers' instructional practice related to integrating media creation as well as avenues to publish student work to an outside audience are warranted.

### ***Influence of the Online Professional Development on Instruction***

After participating in the online professional development, teacher learners' perceptions of their competency with integrating media literacy concepts into their instruction changed with finding connections to their content curriculum, acquiring media literacy language and vocabulary, implementing the open web, and integrating media evaluation into instruction. However, their perceptions of their competency did not change with implementing media creation and publishing. Findings may suggest aspects of the online professional development that may need to be refined to further equip teacher learners with the perceived competency to integrate media creation and publishing into their instruction. Furthermore, findings may have illuminated barriers preventing teachers from integrating media literacy into their instruction.

Scholars and practitioners have suggested that teachers find connections between media literacy and their content curriculum to effectively integrate media literacy into content instruction (Comber & Grant, 2018; Scheibe, 2004). Findings from this study suggested that teacher learners perceived themselves to be more competent with

implementing media literacy instruction themselves by finding connections to their content curriculum. During module 5 of the online professional development, teacher learners collaboratively analyzed their content curriculums to find connections to media literacy. As science and social science teacher learners collaboratively designed media literacy lessons during modules 6 and 7, Jayne, who was the only English language arts teacher, indicated she felt her lesson could have been improved by having other English language arts teachers to collaborate on creating the lesson. Jayne's assertion may support Voogt et al.'s (2016) suggestion that teachers who design curricular resources collaboratively increase their ability to create quality designs. Thus, opportunities for teachers to examine their content curriculum through a media literacy lens within constructivist learning environments may increase their competency with implementing effective media literacy lessons into their instruction.

At the conclusion of the professional development, all six teacher learners felt their competency with using specific media literacy language and vocabulary within their instruction increased. As disciplinary literacy accounts for specialized knowledge and discourses specific to each discipline (Shanahan & Shanahan, 2012), it is possible this finding may indicate the shifting nature of media literacy. For example, during the first four modules, teacher learners were enculturated into the discipline of media literacy by being exposed to knowledge and discourses often reflected by journalists, fact-checkers, and other media-related professions. Thus, teacher learners may have acquired relevant language and vocabulary by communicating and collaborating within media literacy as a disciplinary culture. Thus, this may represent a divide between media literacy as a

discipline in itself and media literacy as a cognitive tool. Further, this assertion may further elucidate the value of school-districts promoting both media literacy instructional integration and media literacy stand-alone courses for teachers and students.

All of the teacher learners had little or no change in their perceived competency with integrating media creation into their instruction. Since scholars have recommended instructional coaching as an effective practice for implementing new skills and strategies (Cox, 2015; Darling-Hammond et al., 2009; Parsons et al., 2019), optional opportunities for instructional coaching were embedded into the online professional development. For example, the instructor offered weekly online open office hours and welcomed appointments to further discuss media literacy concepts. However, none of the teacher learners took advantage of these additional instructional supports. Likewise, the two media creation modules were offered during asynchronous weeks. Within the creation modules, the instructor provided numerous resources and instructions for selected digital tools and stressed the importance of reaching out to the instructor for further coaching related to instructional technology if needed. However, teacher learners used familiar tools to create basic videos and graphics to enhance instruction rather than taking advantage of the additional resources or coaching opportunities offered through the online professional development. This finding may reinforce the importance of instructional coaching and promote required instructional technology coaching embedded within online professional development related to media literacy. Additionally, teachers may not have had time to learn new technology independently as they were returning to the building for a full school year for the first time since emergency distance learning. As

teachers' media compositions were an open-ended assignment designed to allow them to create and play with digital tools, another potential explanation is that they could have benefitted from a more structured assignment with clearer expectations.

In addition to their perceived competency with integration media literacy into content instruction, teacher learners may have indicated potential barriers for media literacy implantation. For example, teacher learners expressed fear of implementing the open web for students to access as well as publish online information. Without leveraging the open web for instructional purposes, students may not be exposed to authentic media literacy experiences that bridge in-school and out-of-school literacy practices. Time is another barrier expressed by teacher learners. Creating videos and other multimedia are often multi-day projects. Two of the six teacher learners indicated they might not be willing to use a great amount of class time for larger media creation projects. Relatedly, three of the six teacher learners suggested they privilege their curriculum content learning goals over explicit teaching of media literacy concepts. Thus, future online professional development related to media literacy might consider how teachers can improve their competency with overcoming barriers such as fearing implementing the Internet and creating time to implement media literacy into their instruction.

### ***Influence of the Online Professional Development on Personal Usage***

In addition to examining the influence of the online professional development on the instructional integration of media literacy, this study also examined the online professional development's influence on teacher learners' own media literacy. Findings indicated teacher learners had increased awareness of media literacy concepts and more



skeptical of the media they consume. However, their competency with creating and publishing media did not change.

All of the six teacher learners indicated they gained increased awareness of media literacy concepts. As Korona and Hathaway (2021) asserted, improvement with awareness of literacy-related concepts is encouraging development towards applying necessary strategies in online environments. At the same time, it is possible that this awareness connects directly to classroom practice by building teacher background knowledge. As all six of the teacher learners indicated they have acquired specific media literacy language and discourses, it is possible that teachers build background knowledge by gaining increased awareness through the first four modules of the online professional development. However, further examination connecting awareness to action within the context of media literacy as well as connecting personal awareness to content knowledge may be warranted.

Teacher learners did not perceive their competency with creating and publishing online media to change. Findings suggested that teacher learners perceived themselves as passive Internet users. Further, they associated publishing media with sharing images through social media with friends and family. Thus, teacher learners felt they did not need increased competency with creation and publishing nor did they value it. While teacher learners have previously expressed they leverage social media to share personal images and text with friends and family (Korona & Hathaway, 2021), the finding reinforces teachers have an opportunity to promote social change through social media.

Examining teacher learners' own media literacy may give insight to their media literacy background knowledge, value of specific media literacy practices, and opportunities for teachers to be change agents within online environments such as social media. However, future online professional development related to media literacy might benefit from explicitly acknowledging the connection between in-school and out-of-school literacies. For example, Penelope mentioned that she began to see the connection between her media literacy teaching practices and her own media usage after taking the online professional development. Thus, allowing teachers to engage with media literacy in ways that transcend instruction and personal life may give them greater insight to create learning experiences for students to bridge media literacy between the classroom and life.

### **Implications for Practice**

Findings outline the differences in knowledge, techniques for making meaning, and discourses for media literacy integration across academic disciplines. These findings may give greater insight to impactful media literacy professional development, curriculum and learning goals, and policy. Thus, it is recommended that media literacy learning experiences promoting instructional integration of media literacy for teachers and resources be designed to represent the knowledge and discourses privileged by each academic discipline by applying the Framework of Disciplinary Media Literacy. Also, it is recommended that school divisions offer stand-alone media literacy-related courses to enculturate students into the discipline of media literacy to apply media literacy strategies outside of school. Thus, it may be beneficial for students to learn how to apply media

literacy as a cognitive tool in different contexts through an integrated approach to media literacy as well as learning the discipline of media literacy to acquire relevant media literacy knowledge and discourses.

Teacher learners applied content from the online professional development to design media literacy lessons. Teachers can look to the Framework of Disciplinary Media Literacy to bridge media literacy concepts and the specialized knowledge and discourses of their disciplines. Likewise, future professional development for practicing teachers might benefit from explicitly presenting the Framework of Disciplinary Media Literacy. Furthermore, teachers across disciplines can look to lessons from this study as exemplars for integrating media literacy instruction. However, it is recommended that teachers critique and adapt these lessons to meet their specific needs of their learners as well as reflect their own teaching style. Additionally, teacher learners repurposed resources from the online professional development to assist with their teaching. It is recommended that future professional development offer teacher ready-made resources to implement media literacy into their instruction. However, professional development must educate teachers about approaching media literacy instruction through design thinking. Tsai and Chai (2012) explained that design thinking empowers teachers to create innovative learning opportunities to meet the academic needs for students across ability levels and contexts. Thus, any ready-made resources related to media literacy are only meant to supplement learning in a more complex instructional design. Allowing teachers to design media literacy lessons collaboratively grouped by similar content areas might allow teachers to

be more comfortable with teaching lessons bridging media literacy and content instruction.

Findings suggested that the online professional development may have strengthened teacher learners' background knowledge of media literacy. For example, teacher learners indicated they felt they had increased competency with speaking with students about media literacy and using specific media literacy vocabulary. This finding may have both instructional and personal implications for the application of media literacy strategies. At the same time, teacher learners indicated they became more aware of applying media literacy concepts in their personal life and were more skeptical of the information they consumed. This finding may point to the value of stand-alone media literacy courses that focus on the specialized knowledge and discourses related to media professionals in addition to an integrated approach to media literacy. Stand-alone media literacy courses may give students a more in depth look at the components of media literacy and stress the importance of media literacy as a learning goal in itself. As the online professional development in this study first taught media literacy concepts to teachers, it may be beneficial for future media literacy professional development opportunities to first teach media literacy as the learning goal before allowing teachers to use media literacy as a cognitive tool within their disciplinary classroom culture.

In addition to building background knowledge, teaching strategies, and improving skills related to media literacy, future professional development should empower teachers to leverage media literacy to advocate for social justice. Likewise, professional developments focusing on an integrated approach to media literacy should consider

allowing teachers to analyze their content curriculums to identify underlying structures of power, privilege, and oppression. As the online professional development presented information at the intersection of media literacy and disciplinary literacy, offering a similar professional development bridging critical media literacy and critical disciplinary literacy may empower teachers to leverage media literacy within their disciplinary context to become change agents by implementing lessons directed toward social change. While module 5 of the professional development discussed critical media literacy and critical disciplinary literacy, teacher learners were not required to engage in hands-on experience with designing lessons for social change. It is recommended that future professional developments related to do an integrated approach to media literacy offer instruction through a critical lens to not only empower teachers to integrate concepts related to social justice into their instruction but also empower students to become change agents in the broader society.

In order to promote social change, teachers should overcome potential fear of using the Internet within content instruction. Teacher learners perceived competency with implementing the open web into their instruction increased at the end of the professional development. Thus, teachers could benefit from future professional development outlining the benefits of allowing students to use the open web for structured Internet searches and modeling safe Internet practices. Likewise, allowing students to search the Internet for information is the first step in empowering students to critically evaluate the online information they consume and could bridge in-school and out-of-school literacy practices. Thus, it is recommended that teachers are educated on pedagogy that empowers

students to effectively search the open web for information. Likewise, it is recommended that teachers implement activities for students to use the open web that mirror out-of-school literacy practices.

Additionally, teacher learners perceived competency with implementing publishing media to outside audiences did not change. Teacher learners were fearful of implementing publishing due to potential reprimand from the school division. Publishing media gives teachers and students an outlet to voice their views and advocate for social change. As topics related to social change are often controversial, it is not surprising that teacher learners were hesitant to distribute student opinions to a broad audience. This finding echoes the need for teachers to find connections within their curriculum to empower students to create and publish media through a critical lens.

Although findings indicated that teacher learners' competency with creating and publishing media in their personal life did not change after the professional development, they felt their background knowledge related to media literacy and skepticism about the information they consume online increased. As previous research indicated teacher learning opportunities related to media literacy increased awareness and skepticism (Korona & Hathaway, 2021), future professional development might benefit from explicitly teaching media literacy strategies aimed at bridging in-school and out-of-school literacies for teachers. This approach may build media literacy background knowledge in teachers to provide more effective media literacy instruction. As teachers often include instruction for media literacy as teachable moments (Korona, 2020), it is important that

teachers have accurate and complete knowledge of media literacy skills, strategies, and dispositions to impactfully educate their students about media literacy.

### **Implications for Research**

Related to the knowledge and discourses privileging each academic discipline, findings aligned with the criteria set forth by Goldman et al. (2016) for epistemology, inquiry practices, strategies of reasoning, forms of representation, types of text, and language structures. Thus, this study situated media literacy strategies within established disciplinary cultures. While this study explored teacher learners' integration of media literacy to address the specialized knowledge and discourses of their academic disciplines, whether this approach to instruction was impactful for student learning was not explored. Further research about the effectiveness of the implementation of the Framework of Disciplinary Media Literacy on student media literacy within specific content areas is warranted.

Teacher learners applied the content from the online professional development to build disciplinary-specific background knowledge, teach media literacy concepts explicitly, allow students to apply media literacy strategies, and create media to demonstrate their disciplinary knowledge. Further research should continue to examine the components of the emerging Framework of Disciplinary Media Literacy to continue building the framework. Additionally, future research should consider impactful curriculums, standards, and policies related to a disciplinary-focused approach to media literacy instruction. Relatedly, teachers in two of the three content areas designed their media literacy lessons collaboratively during the think-aloud portion of the study. Five of

six teacher learners expressed that having the opportunity to work with others expanded their thinking about their media literacy lesson designs. However, few if any studies have employed think-aloud methods for a group to communicate their thinking collaboratively. Future research should examine think-aloud methods related to articulating cognitive processes collaboratively.

Findings indicated that teacher learners perceived their competency improved with finding curriculum connections, acquiring media literacy language, implementing the open web, and evaluating media. Conversely, they perceived their competency with media creation and publishing did not change. Replicating this study with different teacher learners could improve the reliability of this study's findings. Also, the online professional development should be refined based on findings from this study as well as recommendations for improvement. Then, a second iteration of the online professional development should be implemented to design an impactful media literacy online professional development for teachers.

Teacher learners felt they gained increased awareness of media literacy concepts and skepticism after completing the online professional development. However, they perceived their competency with creating and publishing media did not change. While previous research produced similar findings (Korona & Hathaway, 2021), future research should consider impactful methods to examine motivation to apply media literacy concepts in teachers' personal lives. For example, Penelope mentioned that she critically examines the media she consumes when she is actively thinking about doing so. However, she indicated she often scrolls through social media without considering the



media message's credibility. Thus, future research should link motivation, disciplinary media literacy, and personal media usage to design media literacy professional development for teachers to not only build their background knowledge but also their self-awareness of their own media literacy practices.

### **Limitations**

Although this study explored the differences in media literacy instruction, process in which teachers design media literacy instruction, their perceptions of their competency with the instructional integration of media literacy, and their perceptions of their own media literacy competency, findings should be viewed with caution as further exploration of the impact of the online professional development is warranted. Future studies should examine the impact of professional development on teacher pedagogy and media literacy competency by employing experimental or quasi-experimental methods. Likewise, future research should explore the impact of media literacy professional development through longitudinal studies focused on long-term pedagogical change. Additionally, the study does not collect student data. The media literacy practices taught in the online professional development have been recommended by scholars, but few studies examine the direct impact of media literacy on student learning. Future studies should explore the student application of media literacy strategies to determine effective media literacy classroom practices. Despite its limitations, this study addresses gaps in media literacy literature related to media literacy teaching methods and online professional development.

## **Conclusion**

This study addressed the gaps in media literacy literature related to potential teaching practices for the instructional integration of media literacy across content areas as well as teacher education opportunities to equip educators with the necessary media literacy and pedagogical skills for the instructional integration of media literacy. The findings from this study suggested that providing media literacy instruction at the intersection of disciplinary literacy offers a connection for media literacy to be implemented into content classrooms. Likewise, findings may have presented a basic framework for an integrated approach to media literacy education that warrants further examination. The online professional development influenced teacher learners' perceived competency with integrating accessing and evaluating media into their instruction but not creating and publishing. Likewise, the online professional development influenced teacher learners' perceived competency with their own accessing and evaluating media but not creating and publishing. Thus, it is recommended that the online professional development be refined and a second iteration be implemented based on the findings of this study.

Although scholars and practitioners have advocated for media literacy education to combat online misinformation and disinformation (Huguet et al., 2019), only fourteen states have adopted laws and state standards for media literacy to be implemented into classroom instruction. This is concerning given that it is well-documented that students struggle to determine the credibility of the information they consume (Wineburg et al., 2016). Additionally, previous research has documented that teachers value media literacy

instruction but their level of value does not reflect their frequency of media literacy implementation (Korona, 2020). While the social science teacher learners felt that media literacy is embedded within their curriculum, two of the three science teacher learners indicated they privileged their content curriculum over embedding media literacy into their instruction. Thus, the science teacher learners viewed media literacy as an additional responsibility rather than infusing their instruction with media literacy. As media literacy empowers students to read the world, and a disciplinary-specific approach to media literacy gives students the opportunity to read the world through different lenses, it is important for media literacy to become an integral part of the content curriculum. Thus, it is imperative that support for media literacy grows through research, teacher education opportunities, policy, curriculum design, district-wide and school-based programs, and relevant resources to empower teachers to integrate relevant, real-world, and constructivist approaches to promote disciplinary media literacy.

## Appendix A

### Email Recruitment for Study

[Specific content area teachers from selected school division],

My name is Matt Korona, and I am [a high school school-based technology coach] as well as a PhD student at George Mason University. I am currently planning my dissertation research study exploring the influence of a 9-week online professional development related to media literacy on secondary teachers' instruction. To be considered to participate in the study and professional development, please complete the questionnaire below. The link to the questionnaire is also located on the attached flyer. Nine teachers (3 English language arts, 3 social sciences, and 3 science) will be selected. Participants will receive 35 points toward teaching license renewal. Your participation is very much appreciated and will contribute to future effective professional development, curriculum development, and revision of teaching resources. If you have any questions, please contact me (mkorona@masonlive.gmu.edu) or Dr. Amy Hutchison (ahutchi9@gmu.edu).

[Link to questionnaire]

## Appendix B

### Form for Recruitment

#### Questionnaire to Participate in Media Literacy Study

Please complete the questionnaire below to be considered to participate in a research study surrounding 9-weeks of online professional development related to media literacy. Nine secondary teachers (3 English language arts, 3 social studies, and 3 science) will be selected. Selected participants will earn 35 points toward teaching license renewal at the completion of the study.

1. Total Years of Teaching Experience

*Mark only one oval.*

- ☐ 0-4  
☐ 5-9  
☐ 10-14  
☐ 15-20  
☐ Over 20

2. In what content area do you teach?

*Mark only one oval.*

- ☐ English Language Arts  
☐ Social Sciences  
☐ Science

3. Student Course Level Taught

*Check all that apply.*

- ☐ Remedial  
☐ Academic  
☐ Honors  
☐ Advanced Placement  
☐ International Baccalaureate

4. What grade level do you teach?

*Mark only one oval.*

- ☐ Middle School  
☐ High School

5. How many years have you taught your current content area?

*Mark only one oval.*

- ☐ 0-4  
☐ 5-9  
☐ 10-14  
☐ 15-20  
☐ Over 20

6. How would you rate your current knowledge of your content curriculum?

*Mark only one oval.*

	1	2	3	4	5	
Needs significant improvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Outstanding strength

7. How would you rate your competency with digital tools for media consumption (e.g. Newsela, PBS Learning Media, etc.)?

*Mark only one oval.*

	1	2	3	4	5	
Needs significant improvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Outstanding strength

8. How would you rate your competency with digital tools for media production (e.g. WeVideo, Adobe Spark, etc.)?

*Mark only one oval.*

	1	2	3	4	5	
Needs significant improvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Outstanding strength

9. Are you willing to participate in two interviews (one 30-minute interview before the PD begins and one 45-minute interview once it ends)?

*Mark only one oval.*

☐ Yes

☐ No

10. If you are willing to participate in the study, please enter your name and e-mail address below. If you are selected, you will be contacted via e-mail.

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Google Forms

## Appendix C

### IRB Approval



#### Office of Research Integrity and Assurance

Research Hall, 4400 University Drive, MS 6D5, Fairfax, Virginia 22030  
Phone: 703-993-5445; Fax: 703-993-9590

DATE: April 27, 2021

TO: Amy Hutchison  
FROM: George Mason University IRB

Project Title: [1743171-1] Media Literacy Across the Content Areas: Case Studies  
Examining the Influence of an Online Professional Development Opportunity  
on Teacher Pedagogy

SUBMISSION TYPE: New Project

ACTION: APPROVED  
APPROVAL DATE: April 27, 2021  
REVIEW TYPE: Expedited Review

REVIEW TYPE: Expedited review categories #5 & 7

Thank you for your submission of New Project materials for this project. The George Mason University IRB has APPROVED your submission. This submission has received Expedited Review based on applicable federal regulations.

**You are required to follow the George Mason University Covid-19 research continuity of operations guidance. You may not begin or resume any face-to-face interactions with human subjects until (i) Mason has generally authorized the types of activities you will conduct, or (ii) you have received advance written authorization to do so from Mason's Research Review Committee. In all cases, all safeguards for face-to-face contact that are required by Mason's COVID policies and procedures must be followed.**

Please remember that all research must be conducted as described in the submitted materials.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form unless the IRB has waived the requirement for a signature on the consent form or has waived the requirement for a consent process. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by the IRB prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to the IRB office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed (if applicable).



All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to the IRB.

This study does not have an expiration date but you will receive an annual reminder regarding future requirements.

Please note that all research records must be retained for a minimum of five years, or as described in your submission, after the completion of the project.

Please note that department or other approvals may be required to conduct your research in addition to IRB approval.

If you have any questions, please contact Kim Paul at (703) 993-4208 or kpaul4@gmu.edu. Please include your project title and reference number in all correspondence with this committee.

GMU IRB Standard Operating Procedures can be found here: [https://oria.gmu.edu/topics-of-interest/ human-subjects/](https://oria.gmu.edu/topics-of-interest/human-subjects/)

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within George Mason University IRB's records.

## **Appendix D**

### **Informed Consent Form**

#### **Media Literacy Across the Content Areas: Case Studies Examining the Influence of an Online Professional Development Opportunity on Instruction**

##### **INFORMED CONSENT FORM**

##### **RESEARCH PROCEDURES**

This research is being conducted to examine how teachers integrate media literacy into their content instruction, their perceived competency with the instructional integration of media literacy, their perceived competency with their own media literacy, the frequency in which they implement media literacy practices, and the influence of an online professional development opportunity on their pedagogy. If you agree to participate, you will be asked to participate in the following: two interviews, a 9-week online professional development opportunity, think-aloud protocol, integrating media literacy into your content instruction, and implementing and recording a classroom lesson.

##### **RISKS**

There are no foreseeable risks for participating in this research.

##### **BENEFITS**

The benefits to you include 35 professional development points toward teaching license renewal. In addition, the benefits include the furthering of research in the understanding of effective professional development opportunities related to an integrated approach of media literacy education.

##### **CONFIDENTIALITY**

The data in this study will be confidential. All names will be removed from coded professional development assignments as well as interview and verbal protocol transcripts. Pseudonyms will be used in the final written report. All data will be stored in a password protected Microsoft OneDrive associated with GMU. Data will be destroyed five years after collection.

Identifiers will be removed from the data, and the de-identified data could be used for future research without additional consent from participants.

The Institutional Review Board (IRB) committee that monitors research on human subjects may inspect study records during internal auditing procedures and are required to keep all information confidential.

Audio and video will be captured through the screen record feature in Microsoft Teams. Microsoft Teams creates a link to a video file which will be downloaded to a GMU computer. The video file will be uploaded to a password protected Microsoft OneDrive associated with GMU. Audio will be transcribed. Recordings will be deleted upon transcriptions. The interview transcripts will be coded. Excerpts and summaries from the interviews will be presented as data in the final written report. The transcripts will be destroyed within five years after the study ends.

## **PARTICIPATION**

Your participation is voluntary, and you may withdraw from the study at any time and for any reason. If you decide not to participate or if you withdraw from the study, there is no penalty or loss of benefits to which you are otherwise entitled. There are no costs to you or any other party.

## **CONTACT**

This research is being conducted by Matthew Korona at George Mason University. He may be reached at (540) 222-7419 or mkorona@masonlive.gmu.edu for questions or to report a research-related problem. You may also contact Amy Hutchison at George Mason University. She may be reached at (703) 993-2166 or ahutchi9@gmu.edu. You may contact the George Mason University Institutional Review Board office at 703-993-4121 or IRB@gmu.edu if you have questions or comments regarding your rights as a participant in the research.

This research has been reviewed according to George Mason University procedures governing your participation in this research.

## **CONSENT**

I have read this form, all of my questions have been answered by the research staff, and I agree to participate in this study.

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Signature

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Date of Signature

## Appendix E

### Pre-Professional Development Interview Protocol

- Describe a time you taught students to access media within a content lesson.
  - How competent were you in providing instruction for accessing media messages?
  - How often do you provide instruction about accessing media messages?
- Describe a time you taught students to analyze or evaluate media within a content lesson.
  - How competent were you in providing instruction for analyzing and evaluating media messages?
  - How often do you provide instruction about analyzing or evaluating media messages?
- Describe a time you taught students to create media within a content lesson.
  - How competent were you in providing instruction for creating media messages?
  - How often do you provide instruction about creating media messages?
- Describe a time you taught students to reflect about media within a content lesson.
  - How competent were you in providing instruction for reflecting about media messages?
  - How often do you provide instruction for reflecting about media messages?
- Describe a time you taught students to publish media within a content lesson.
  - How competent were you in providing instruction for publishing media messages?
  - How often do you provide instruction about publishing media messages?
- Describe a time you accessed media in your personal life.
  - How competent were you in accessing media messages?
- Describe a time analyzed or evaluated media in your personal life.
  - How competent were you in analyzing and evaluating media messages?
- Describe a time you created media in your personal life.
  - How competent were you in creating media messages?
- Describe a time you reflected about media in your personal life.
  - How competent were you in reflecting about media messages?
- Describe a time you published media in your personal life.
  - How competent were you in publishing media messages?

## Appendix F

### Post-Professional Development Interview Protocol

- Describe how you currently integrate media literacy into your instruction while addressing content area learning goals?
- What specific media literacy concepts do you feel most closely align with your content area? How?
- Describe the process of collaboratively designing your media literacy lesson.
- Describe the knowledge from which you drew to design your media literacy lesson.
- How did the knowledge from which you drew align with the knowledge from which your design team members drew?
- Describe a time you taught students to access media within a content lesson.
  - How competent were you in providing instruction for accessing media messages?
- Describe a time you taught students to analyze or evaluate media within a content lesson.
  - How competent were you in providing instruction for analyzing and evaluating media messages?
- Describe a time you taught students to create media within a content lesson.
  - How competent were you in providing instruction for creating media messages?
- Describe a time you taught students to reflect about media within a content lesson.
  - How competent were you in providing instruction for reflecting about media messages?
- Describe a time you taught students to publish media within a content lesson.
  - How competent were you in providing instruction for publishing media messages?
- Describe a time you accessed media in your personal life.
  - How competent were you in accessing media messages?
- Describe a time analyzed or evaluated media in your personal life.
  - How competent were you in analyzing and evaluating media messages?
- Describe a time you created media in your personal life.
  - How competent were you in creating media messages?
- Describe a time you reflected about media in your personal life.
  - How competent were you in reflecting about media messages?
- Describe a time you published media in your personal life.
  - How competent were you in publishing media messages?

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## **Biography**

Matthew Korona graduated from Albert Gallatin Senior High School in Uniontown, PA in 2005. He received his Bachelor of Science in Education and Bachelor of Arts from California University of Pennsylvania in 2009. He received his Master of Education in English and Communications Education from the University of Pittsburgh in 2013. He previously worked as a middle school language arts teacher in Prince William County Public Schools and is currently employed as an Instructional Facilitator, Technology in Loudoun County Public Schools. He currently resides in Culpeper, VA with his wife, two daughters, and dog.