

HOW EXPERT SECONDARY SPECIAL EDUCATION TEACHERS CONCEPTUALIZE
TEACHING LITERACY IN THEIR CONTENT AREA TO STUDENTS WITH LEARNING
DISABILITIES

By

ALEXANDRA A. LAUTERBACH

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To my beautiful and brilliant mother, Dr. Sarah Steen Lauterbach
Awakening and nurturing meaning and understanding

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Abstract of Dissertation Presented to the Graduate School
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ALEXANDRA A. LAUTERBACH

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This study provides insight into the cognition of expert content area teachers with specialized knowledge in teaching literacy to students with learning disabilities (LD), with the purpose of developing an understanding of expertise in teaching literacy in the content areas to secondary students with LD. This study used hermeneutic phenomenology to explore teachers' perceptions of teaching secondary students with LD literacy within their content areas, answering the question: How do expert secondary content area teachers conceptualize teaching literacy in their content area with students with learning disabilities? Using three different interviews: an initial interview, a think-aloud interview, and an elicitation interview, the researcher obtained experiential descriptions from the participants. Following a modified model of van Manen's (1984) method of phenomenology, the researcher engaged in an analysis from which descriptions of the teacher's lived experiences were derived, reflecting how they conceptualized their instruction, their framework for teaching. The teachers' frameworks included their conceptualizations of: (a) developing literacy skills with an eye toward the future; (b) understanding students' learning disabilities; and (c) designing instruction to further students learning.

CHAPTER 1 INTRODUCTION

Research Problem and Rationale

Many teachers work unsuccessfully to prepare students with learning disabilities (LD) to meet curriculum demands at the middle and secondary levels (Deshler, Schumaker, Lenz, Bulgren, Hock, Knight, & Ehren, 2001). Students with LD struggle to make adequate gains toward grade level standards, putting them at great risk for not completing high school with a regular diploma and threatening their ability to pursue a postsecondary education, be it career training or college (Cortiella, 2011). The number of full-time, first time freshmen with LD enrolled in colleges and universities has increased from .05% of all freshmen in 1983 to 3.3% of all freshmen in 2008 (Pryor et al., 2008), indicating that significantly more students with LD attend postsecondary institutions now than did in the past (Sharpe & Johnson, 2001). In spite of this increase in enrollment, their enrollment rates are still significantly lower than their typically developing peers. According to the National Longitudinal Transition Study-2 (NLTS-2) report (2009), only 34.7% of students with LD attend 2-year/community colleges after leaving secondary school and only 15.9% attend 4-year colleges.

The challenges teachers experience in serving these students are likely the direct result of the literacy difficulties students with LD experience in content area instruction. Approximately 80% of students with LD demonstrate difficulty with reading (Kavale & Forness, 1999). As students transition from elementary school, literacy demands become increasingly challenging. During the lower elementary grades, texts contain familiar, high-frequency words. In the upper elementary grades, “the ideas and language become more abstract and more subtle and the vocabulary is less familiar” (Chall, Jacobs, & Baldwin, 1990, p. 11). Chall et al. (1990) described the change

between these stages as a transition from “learning to read to reading to learn” (p. 14). Essentially, students gain access to knowledge in their content area classes through reading. Also, Chall (1983) asserted, “Knowledge can be acquired only if one knows how to read the texts that contain it” (p. 70). Because many students with LD have reading disabilities, they are unable to gain access to the knowledge contained in texts unless they receive proper reading instruction and support.

Though the shift from learning to read to reading to learn affects many students, the transition is more problematic for students with LD. Because of the reading problems students with LD face, they read less over time and as a consequence have less exposure to the knowledge and vocabulary that reading text repeatedly provides. As a result, these students fall further and further behind, and a gap in their performance emerges. Warner, Schumaker, Alley, and Deshler (1980) explored the “performance gap” between what students are expected to do and what they can do. For students with LD, the gap grows larger over time, especially in the later grades when the academic growth of students with LD plateaus. In a more recent study, Wei, Blackorby, and Schiller (2011) found further evidence of a performance gap. Researchers compared students across 11 different disability categories and found that the gap between expectations and performance in reading grew over time and that students with LD were unable to close the gap. Consequently, these students were unable to meet the demands of required courses in the content areas in high school (Warner et al., 1980).

Because of the challenges all students experience when the literacy requirements of content area texts increase, advocates have pushed to include literacy instruction in content area classrooms for more than a decade (Mraz, Rickelman, &

Vacca, 2009; Monte-Sano, 2011). Researchers have long believed there was great value in teaching literacy in the content area for both improving literacy skills and content area learning (Anders & Levine, 1990; Bean, 2000; Dishner & Olson, 1989; Moore, Readence, & Rickleman, 1983). One strategy for integrating literacy instruction into content area classes, called content area literacy, is grounded in the notion that reading, regardless of the content area, requires similar cognitive processes (Fang, 2012). As such, more general literacy strategies have been promoted, such as summarizing, outlining, and using graphic organizers (Johnson, Watson, Delahunty, McSwiggen, & Smith, 2011; Monte-Sano, 2011). These general practices are useful across many different content areas (Heller & Greenleaf, 2007; Moje, 2008), especially for students with LD (Faggella-Luby, Graner, Deshler, & Drew, 2012). For students with LD, the inclusion of literacy instruction offers more opportunities to practice literacy skills and to do so in the context in which they are needed (Ehren, Deshler, & Graner, 2010),

Recently, Shannon and Shannon (2008) proposed a new approach, called disciplinary literacy, to infusing reading into content area classes. Disciplinary literacy advocates believe that reading is content specific and that understanding the oral and written language of a discipline requires more than just the ability to decode and comprehend the text. It requires that students understand the “ways of thinking” associated with a discipline (Monte-Sano, 2011). Shanahan and Shanahan (2008) explored how experts in different disciplines read texts and found that experts used distinctly different approaches depending on the discipline in which they were trained. Furthermore, the texts themselves vary significantly across subjects, containing different vocabulary and text structures specific to the discipline (Moje, 2010). Proponents of disciplinary literacy see content area literacy as problematic because it overlooks the

domain specific nature of content area reading (Shannon & Shannon, 2012; Fang, 2012). Although a great deal of research on the impact of content area literacy has been conducted with students with LD, very few studies have explored the effectiveness of disciplinary literacy instruction on the learning of such students (Faggella-Luby et al., 2012). Deciding between content area literacy instructional practices and domain literacy instructional practices to teach and support students with LD in learning the content requires judgment on the teacher's part, because little research on the effectiveness of domain literacy instructional practices exists for this population.

To what degree, however, are content area teachers prepared to make such judgments and teach literacy skills to students with disabilities? The results of research exploring the attitudes, beliefs, and preparedness of content area teachers towards incorporating literacy instruction into their classes do not bode well for students with LD. A number of the earliest studies exploring this question found that secondary teachers are resistant to incorporating literacy instruction into their content area classes (Alvermann & Moore, 1991; O'Brien & Stewart, 1992; O'Brien, Stewart, & Moje, 1995; Ratekin, Simpson, Alvermann, & Dishner, 1985). In a review of such literature, Hall (2005) asked the following questions: (a) What were preservice and inservice teachers' beliefs towards incorporating reading instruction into their content area? (b) How did preservice and inservice training influence teachers' beliefs and practices? Hall found similarities in the beliefs of preservice teachers and the beliefs of inservice teachers. First, Hall found that both groups did not appear to feel responsible for students' inability to read texts in their classes. The teachers' beliefs that reading instruction was worthwhile did not result in more reading instruction in their classrooms. Both groups felt that learning the content took priority over reading, that learning the content could be

done independently of reading, and that traditional teaching methods such as lecturing could circumvent students' reading difficulties. Finally, preservice teachers felt underprepared to teach reading and that it was not their responsibility, whereas inservice teachers also felt underprepared but saw value in learning to teach reading in the content area. Addressing the second question, Hall found that preservice teacher coursework could influence their attitudes toward teaching reading but did not necessarily affect their practice, especially if the preservice teachers believed it would not be valued in their schools. Inservice teachers' attitudes toward content area reading could also be changed, but this also did not translate into instructional changes, especially when inservice teachers felt that they had learned generic strategies that did not apply to their content area, and when they did not feel prepared after the trainings to teach reading in their content area. In a more recent study Cantrell, Burns, and Callaway (2009) found that after participating in extensive professional development focused on content area literacy instruction, researchers were able to influence teachers' attitudes towards incorporating reading instruction, their efficacy regarding incorporating literacy instruction, their views of their roles in teaching reading, and their understanding of how students learn to read. In spite of this, even the most efficacious teachers felt unprepared to teach literacy within the content area to students with reading difficulties.

Clearly, many content area teachers are resistant to or feel underprepared to teach literacy to students, and more importantly, they feel especially underprepared to teach literacy to students with LD, even after extensive professional training. As such, the next relevant question is how prepared are content area teachers to teach students with LD? Students with LD are more likely to receive their content area instruction in

general education classrooms than in special education settings (Newman, 2006). Although it is quite difficult to determine whether current general educators are well prepared to meet the needs of students with LD, a handful of researchers in the past two decades have explored how institutes of higher education prepare general education teachers to teach children with disabilities. Many of these researchers found that general education preservice teachers had inadequate coursework in special education or inadequate experience in inclusive settings (Kearney & Durand, 1992; Reed & Monda-Amaya, 1995; Shippen, Crites, Houchins, Ramsey, & Simon, 2005). A more recent study by Harvey, Yssel, Bauserman, and Merbler (2010) demonstrated a marked improvement in the courses offered to general education preservice teachers and in the opportunities for collaboration with special education. Although this single study indicates that teacher education programs are improving how they prepare general education teachers to teach in inclusive settings, many current teachers were trained before these improvements to teacher education. Teachers aged 40 and over accounted for 60% of the teacher population in the 2000 census (Population Reference Bureau, 2002), which means that the majority of teachers attended teacher education programs that did not include these improvements. Although these teachers may have received professional development or additional training in teaching students with LD, in a study of state and local implementation and impact of the Individuals with Disabilities Education Act, only 43% of the principals reported that general educators were well prepared to improve the performance of students with Individualized Education Programs, and only 41% reported the general educators were well prepared to increase access to the general education curriculum (Cortiella, 2011). These data suggest that students with LD are taught by general education teachers who may have attended

teacher education programs that provided inadequate instruction in teaching students with LD and who are not perceived by their principals to be well prepared to meet the needs of such students.

Purpose of the Study

Because few teachers are prepared to teach content area literacy or students with LD, it is unlikely that most teachers have an understanding of how to incorporate literacy instruction into their content classes or an adequate understanding of their students with LD to determine if particular strategies would be helpful to them. Although some researchers have argued that effective teaching is effective inclusive teaching for all (Jordon, Schwartz, & McGhie-Richmond, 2009), research indicates that good practice for one set of learners may not be good practice for another (Carlisle, Kelcey, Berebitsky, & Phelps, 2011; Connor et al., 2009). This is further complicated for literacy instruction in the content areas by the conflict between disciplinary literacy practices and content area literacy practices, the lack of research regarding literacy instruction for students with LD within disciplinary literacy, and the inability of previous teacher education and professional development studies to effectively influence teachers' instructional practices in this area.

One potential line of research is to focus on which literacy instruction practices within the content areas are effective for students with LD, whereas another line of research is to explore the expertise associated with the task of teaching students with LD literacy within the content areas. Although Alexander and colleagues (2004) criticized research on teacher expertise primarily for its lack of ecological validity and for the stark contrast drawn between experts and novices without consideration for development, they still saw value in understanding expertise. The fundamental

assumption is that effectively guiding learners toward competence requires an understanding of how expertise develops, as well as a detailed picture of the endpoint of that development. Having an understanding of the endpoint of the development of expertise in teaching literacy in the content areas to students with LD could (a) help researchers see what practices expert teachers use within the classroom to support students with LD, (b) help researchers design studies that could lead to a developmental understanding of expertise in such teaching, and (c) serve as the basis for teacher education and professional development activities intended to move individuals toward expertise.

This study provides insight into the cognition of expert content area teachers with specialized knowledge in teaching literacy to students with LD, with the purpose of developing an understanding of expertise in teaching literacy in the content areas to secondary students with LD. The teachers selected for this study are unlike typical content area teachers in general education classrooms. They were hired to work in a private school for students with LD based on their expertise in content area instruction and their willingness to teach these students. Additionally, these teachers have worked in this school for an extended period of time, acquiring considerable experience and exposure to multiple learning opportunities. Because of their learning and teaching experiences, these expert teachers are likely to have unique understandings about the students' literacy needs during content instruction and about how to support those literacy needs that could (a) lead to an understanding of the practices expert teachers use within the classroom to support students with LD in literacy in the content areas, (b) aid in the design of future studies aimed at understanding the development of expertise

in such teaching, and (c) serve as the basis for professional learning systems intended to move individuals along the continuum toward expertise.

Research Question. How do expert secondary content area teachers conceptualize teaching literacy in their content area to students with learning disabilities?

Definition of Terms

Expertise

Research on expertise originated in the field of psychology. Expertise in psychology has been studied primarily in terms of cognition (mental processes). Expertise can be defined, at a cognitive level, in terms of development, knowledge structures, and reasoning processes (Hoffman, 1996). Seminal studies of expertise in education have also used a cognitive definition of expertise (Berliner, 1986; Leingardt, 1983; Livingston and Borko, 1990). Many studies, across various fields, have found evidence and support for expertise as a cognitive construct (Alexander, 2003; Alexander et al., 2004). Studies on expertise in fields other than teaching (e.g. chess and medicine) have found experts and novices think and behave differently: Experts can access their knowledge more efficiently and apply it across different situations, unlike novices, and expertise is specific to a domain. Furthermore, it takes a significant amount of time to develop (Alexander, 2003; Alexander et al., 2004). Because of this, many researchers in education have used experience or effective performance interchangeably with the term expertise, leading to a great deal of confusion within educational studies of expertise (Palmer, Stough, Burdenski, & Gonzale, 2005). As recommended by Palmer et al., in a review of the criteria used for expertise in educational studies, expertise in this study was defined as a cognitive construct.

Markers of expertise, such as years of experience, education, and behavior were used to identify expert teachers, but the study focused on the cognitive features of expertise.

Learning Disabilities

Today, the Individuals with Disabilities Education Act of 2004 uses the following definition of learning disabilities:

The term *specific learning disability* means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations... Such term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia... Such term does not include a learning problem that is primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage. (IDEA, 2004)

In this study, the term learning disabilities (LD) refers to the above definition.

Furthermore, there are many disabilities that are frequently comorbid with LD, such as ADHD. As many of the teachers in this study did not distinguish between their students with LD, the students with attention problems, and their students with both disorders, all students teachers identified as “LD” are included in this study’s definition of learning disabilities.

Domain

According to the Oxford dictionary of US English, a domain is “a specified sphere of activity or knowledge.” In education, the specified sphere could be a particular content area, such as social studies or mathematics. This would include knowledge of the domain, such as knowledge of social studies, and knowledge of subdomains, such as knowledge of American history, or of geography. A domain may also include activity. In education said activity could include teaching, planning and reflection that is specific to the domain. In education, though, there are potentially many domains beyond the

content area. A domain could also include teaching a particular population, such as students with LD, or the subdomain of teaching students with reading disabilities. Research that focuses on the domain specific nature of expertise explores what is common across experts in a particular domain (Alexander, 2003; Alexander et al., 2004).

Conceptualize

The Oxford dictionary of US English defines conceptualize as the action of “form[ing] a concept or idea of something,” with concept being “an abstract idea.” In this study, the act of conceptualizing is the act of forming an idea about the task of teaching within four potential domains: literacy, a content area, students with LD, and secondary students.

CHAPTER 2 LITERATURE REVIEW

In the past several decades, there has been a strong move toward including students with disabilities in general education classrooms. Ninety-four percent of secondary school students with learning disabilities (LD) take at least one class in a general education setting, and 80% take one or more academic courses in general education settings (Newman, 2006). Students with LD are more likely to take math courses in general education settings than in special education settings (62% vs. 43%); the same is true of science (74% vs. 29%), social studies (71% vs. 32%), and foreign language courses (90% vs. 9%; Newman, 2006). Content courses place considerable reading and writing demands on students with LD, as reading and writing are the primary vehicles for learning in these classes (Chall et al., 1990; Deshler et al., 2001). Students with LD, however, experience significant difficulties in these areas, which impedes their progress in content classes (Deshler et al., 2001; Kavale & Forness, 1999). Thus, the success of students with LD in content area classes depends on teachers' ability to support student literacy needs while teaching content.

Although a few key researchers have established the efficacy of teaching certain reading and writing strategies to students with LD, little is known about how general education teachers can integrate these strategies into their knowledge of content to provide effective content area literacy instruction for students with disabilities (Deshler et al., 2001; Faggella-Luby et al., 2012). The broader literature base on expertise suggests that expert teachers capable of addressing content area literacy needs and the severe reading issues exhibited by students with LD will have extensive, well-integrated knowledge of multiple domains (Faggella-Luby, Graner, Deshler, & Drew, 2012). Findings from research in literacy instruction suggest that one domain would be

knowledge how to teach both the content and the disciplinary-specific literacy practices needed for processing the content (Johnson, Watson, Delahunty, McSwiggen, & Smith, 2011). Further, research in special education suggests additional domains necessary for students with SLD would be knowledge of how to teach literacy and knowledge of how the literacy process breaks down for students with SLD (Brownell et al., 2009; Spear-Swerling, 2009; Spear-Swerling & Brucker, 2004). Finally, research on expert teachers has demonstrated the importance of strategic processing ability, the ability to utilize procedural knowledge to gain understanding, to appropriately employ their knowledge in complex settings (Alexander, 2003; Alexander, Sperl, Buehl, Fives, & Chiu, 2004).

At this point in time, however, there are no studies describing the various knowledge bases expert general education teachers have for teaching content to students with LD. Thus, the purpose of this literature review is to examine how expertise is described in two disparate literature bases: studies involving special education teachers and studies involving secondary content area teachers. The intention is to identify the characteristics of expertise in each domain and then to integrate findings from these two literature bases to improve our understanding of teacher expertise in content area instruction for secondary students with LD.

The Literature Search

Research studies were identified through a search of electronic databases including EBSCOhost, ERIC, Google Scholar, and the University of Florida library catalog. All of the databases were searched using a matrix of the following key terms: expert, expertise, novice, teacher, educator, teaching, education, social studies, history, English, language arts, science, mathematics, and special education. Electronic search

results were explored until the items returned were only loosely related to the original search terms; relevant search results generally totaled about 400 items. Abstracts were used to further narrow the search results.

From this group of studies, redundant literature was discarded, and only empirical studies in English-language peer-reviewed journals that included original research data were kept. Because I was interested in studies within specific content areas, I discarded research that included multiple content areas unless the researchers had separated the analysis of each content area. None of the studies that included multiple content areas separated the analyses of the different content areas. Furthermore, studies in which the content area was not identified were also excluded. Because I was interested in studies of teachers currently practicing in secondary settings, papers including teachers in elementary or postsecondary settings, or teachers not currently placed in classrooms, were discarded unless the secondary teachers were separated out in the analysis. None of the studies separated the analyses of elementary, secondary, and postsecondary students. I also excluded studies that did not identify the grade or level in which the participants were teaching.

Although the search resulted in a large number of articles that referred to teacher expertise, I found that many of the studies using the term expertise did not use the cognitive construct that cognitive scientists (e.g., Chi, Glaser, & Farr, 1988) or educational researchers (e.g., Berliner, 1986; Leingardt, 1983; Livingston & Borko, 1990) have described and developed. In other studies, the researchers reviewed the literature on teaching expertise in the introduction but they used terms such as experienced instead of expert teacher. Thus, to ensure that the studies focused on the cognitive construct of expertise, the sample was limited to those studies that both used

the cognitive construct of teaching expertise and explicitly labeled the teachers within their studies as experts. Following these procedures, 13 studies were identified.

The Domain-Specific Nature of Expertise within Secondary Content Areas and Special Education

Most research in expertise is focused on either the generalizable characteristics of expertise or the domain-specific nature of expertise (Alexander, 2003; Patel & Groen, 1991). Research that focuses on the generalizable characteristics of expertise explores what is common across experts in different fields. In educational research, researchers look for what is comparable across content areas. Research that focuses on the domain-specific nature of expertise explores what is common across experts in a particular domain. In educational research, a domain would be a particular content area, such as social studies or mathematics. Literature reviews of expertise in education have taken the generalizable approach, first looking for similarities in experts across many domains and then comparing the generalizable characteristics of expert teachers to the generalizable characteristics of experts outside of education (Berliner, 2001; Berliner, 2004).

No literature reviews of educational research have explored the domain-specific characteristics of expertise within secondary education or special education. This literature review is intended to fill this gap, primarily focusing on the domain-specific nature of expertise in special education teachers and secondary content area teachers. As such, I will first review the literature in secondary content area expertise, organized by domain (content area). I will also review the literature on expert teachers of students with disabilities. The secondary focus of this literature will be on the generalizable characteristics of expertise across domains. I will compare the findings of the domain-specific studies, looking for similarities between experts in different domains to identify

the generalizable characteristics of secondary expert teachers and special education teachers.

Social Studies

In one of the earliest studies of secondary teacher expertise, Gudmundsdottir and Shulman (1987) compared expert and novice secondary social studies teachers using Shulman's (1986) model of pedagogical reasoning. The researchers were interested in how expert and novice teachers with expertise in their content area differed in their ability to draw on numerous knowledge bases when reasoning, including content knowledge, pedagogical content knowledge, curricular knowledge, general pedagogical knowledge, knowledge of aims and purposes, knowledge of learners, and knowledge of educational contexts, settings, and governance.

The participants in this study included two social studies teachers: one expert and one novice. The expert teacher had 37 years of experience, had a degree in American history, was currently teaching US history, and was recommended as experienced by the principal of the school. The novice was a preservice teacher enrolled in a teacher education program, had a degree in anthropology, and was teaching world studies. The expert was interviewed 3 times and observed 22 times, whereas the novice was interviewed 8 times and participated in 6 planning cycle interviews. In addition to interviews, the data included observations. The researchers wrote summaries of the novice teacher's data and developed vignettes of the expert teacher's data, which were then coded. In addition to treating the data differently, the researchers provided little description of the data analysis process.

The researchers reported qualitative differences between the expert and novice teachers. The expert had a clear "point of view" in US history (Gudmundsdottir &

Shulman, 1987, p. 67). From his perspective, US history is the “growth of opportunities for participation in the democratic process” (Gudmundsdottir & Shulman, 1987, p. 62). The novice did not have a clear point of view of world studies but was knowledgeable in two specific areas: anthropology and evolution. The expert was able to visualize the curriculum, seeing many different ways to teach the content and make connections between units. Furthermore, the expert teacher knew what information was important in conveying his perspective. The novice, on the other hand, knew only one way to teach the content. He considered only one unit at a time rather than seeing the connections between units.

The researchers concluded that differences between the expert and novice teacher may have been the result of their opportunities to “redefine” their content knowledge into pedagogical content knowledge, meaning to transform the subject matter to make it “teachable” (Gudmundsdottir & Shulman, 1987, p. 67). Making content teachable involved understanding how students learn, how their learning aligns with the content, and how to communicate that content to students. The expert had been teaching for 37 years, and the novice less than 1. The researchers concluded that though both the expert and novice were concerned with the integrity of the content, the experts’ opportunities to try and retry teaching content had helped the expert redefine content knowledge as pedagogical content knowledge. Furthermore, the researchers concluded that having a point of view is an important aspect of pedagogical content knowledge. The results of this study, however, are questionable because the data for the two teachers were treated differently. As a result, the differences that emerged from the data may be a product of the different data sources or the different processes for coding and analyzing the data, making the findings of this study less trustworthy.

More recently, Brooks (2010) examined how expert geography teachers' understanding of their subject area was influenced by their views and values, and how their understanding influenced their teaching. Brooks asserted that teachers' conceptualizations of geography were the result of different experiences. Brooks stated that values were developed mainly through academic experience and that teachers were influenced by their past experiences as students and teachers of geography. Brooks hypothesized that when and where teachers learned geography influenced their understanding, which in turn influenced their practice.

Brooks (2010) selected six secondary geography teachers in the United Kingdom as experts through recommendations by geography tutors in the teacher education programs or by head teachers at their schools. Other criteria typically considered important in selecting teachers were not considered. Two of these six teachers were highlighted in the manuscript as having 13 years of experience and 20 years of experience. Both teachers were heads of departments at their schools and had numerous other professional achievements, such as publications and roles in developing curriculum. The data collected on all six teachers included interviews, observations, and documentation of lesson planning. Brooks did not provide details regarding the data analysis but did provide quotes justifying the conclusions.

Brooks (2010) reported differences between what the two highlighted teachers believed were important to their instruction. One teacher placed emphasis on the role of culture in geography, whereas the other placed emphasis on the role of location in geography. The teachers' varying views on teaching geography reflected their early learning experiences. Although the teachers' views were different, the researcher found that both expert teachers acted upon their understandings in similar ways, providing a

rationale for the content they selected to teach. What the teachers emphasized acted as a guiding principal through which they negotiated policy related to their curriculum and interpreted their teaching. One teacher believed that policy was a barrier to teaching the type of geography he believed was best, whereas the other felt that policy reflected his beliefs about teaching geography.

Brooks (2010) concluded that the teachers' understandings reflected the teachers' experiences and, in turn, influenced the teachers' practice. The teachers used the understandings to provide a rationale for their teaching. Furthermore, it was through their understanding that they interpreted and negotiated policy related to curriculum, helping them to work within a policy or work around a policy when crafting instruction. Brooks' conclusions, given the criteria for selecting the participants and the lack of detail given regarding the analysis, are less trustworthy.

Implications. Drawing parallels across these two studies is very difficult, primarily because the content of the social studies' subdomains in these studies varied. The teachers in these two studies taught geography, world studies, and history, each with significantly different content. Furthermore, both studies were fraught with methodological issues. In spite of these two limitations, the findings present an interesting implication for future research. The ability to rationalize one's decisions based on the emphasis or perspective one takes of one's content may be a marker of expertise. The experts in Brooks (2010) study gave a rationale for their teaching based on their understanding of their content. The expert in Gudmundsdottir and Shulman's (1987) study also appeared to give a rationale for why particular information was chosen over others. The novice, on the other hand, was described as having only a single way to teach the content. Especially with stronger methodology, exploring how

teachers' specific subdomain knowledge within social studies influences their rationalization of their practice could lead to a deeper understanding of expertise within the domain of social studies.

English Language Arts

The first study in language arts took place in Israel. Rich (1993) investigated the impact a professional development (PD) effort in cooperative learning had on experts' and non-experts' instruction. The PD involved 20 hours of inservice training in a small group cooperative learning program called Student Teams-Achievement Divisions (STAD). Rich explored the variations in how much the teachers changed after participating in the PD. Furthermore, Rich was interested in whether expertise was a stable construct, or whether teachers classified as experts remained experts when involved in a PD effort that asked them to explore new types of instruction.

Participants included nine 7th-grade language arts teachers. All of the teachers in the study had at least 4 years of teaching experience. Six teachers were classified as "general teaching experts" prior to the PD. They were described as "experienced," "highly regarded by their principals and peers," and "confident," and they "facilitated good progress in student achievement" (Rich, 1993, p. 139). The remaining three teachers were classified as non-experts. While these criteria are similar to those common to studies of expertise, other than by recommendations from the principals, how Rich determined whether teachers met the criteria was not explained.

Rich (1993) collected the following data: (a) interviews with the teachers before and after they participated in the PD; (b) mentors' observations of instruction before and during the PD, and their notes; (c) interviews with the mentors; (d) feedback from the teachers; and (e) student achievement results on teacher-made tests. After identifying

teachers as general teaching experts or non-experts based on the above criteria, Rich evaluated whether the teachers had expertise in the content of the PD, cooperative learning, early in the PD and again at the end of the PD, by assessing the quality of PD implementation. Rich then explored the role the participants' subject matter expertise played in their performance. Rich assumed that teachers who graduated from a highly credentialed teacher education program were subject matter experts, but provided no support for this assertion. How Rich analyzed the interviews, notes, and other data was not described in detail.

Rich (1993) found that the two teachers who were identified as cooperative learning experts before and after the PD were both subject matter experts and general teaching experts. Rich attributed this stability partially to the teachers' subject matter expertise but did not provide any data to support his conclusion. The remaining teachers (both general teaching experts and non-experts, and both subject matter experts and non-experts) did not demonstrate stable classification as cooperative learning experts. Because of this variance, Rich speculated that additional variables, beyond subject matter and general teaching expertise, influenced implementation.

Rich (1993) concluded that the incongruence between an expert teacher's beliefs and the PD may have contributed to weaker implementation, though few quotes from the data were supplied to support this conclusion. Because of the insufficient methods used to classify teachers as general teaching and subject matter experts, the poor description of the data analysis, the weak evidence given, and Rich's unsubstantiated conclusions, the findings from this study are not trustworthy.

The second selected study in language arts was conducted in Geneva, Switzerland. Tochon and Munby (1993) studied 23 expert and 23 novice 7th-grade

language arts teachers' perception of time. The researchers were interested in the ways in which novice and expert teachers talked about teaching, and more specifically about planning, and the role time played in that talk. The researchers reviewed the semiotic theory of didactic and synchronic time. Didactic time is derived from diachrony, meaning "the evolution in the course of time in a historical perspective" (Tochon & Munby, 1993, p. 206). According to the researchers, didactic time in planning involved making decisions prior to instruction. Synchronic time was derived from synchrony, meaning "present immediacy, or a state of time like here and now" (Tochon & Munby, 1993, p. 206). Synchronic time in planning involved making immediate decisions during instruction. The researchers hypothesized that novice teachers would emphasize didactic time in their discussions of teaching, and that expert teachers' discussions would include more synchronic time than the novices' would, as prior research has shown experts to be more flexible in their thinking than novices.

The researchers identified experts based on four criteria. Each expert teacher had a master's degree in language arts, educational training, a nomination for tenure, and at least 7 years of experience, meeting many of the criteria common in studies of teacher expertise (Stough et al., 2010). Novices were either substitute teachers with 1 or more years of experience or they were postulant teachers, meaning they were in their second year of teaching and had not taken any teacher training classes. The researchers collected interview data, and the teachers participated in a simulation in which they planned a lesson. The interviews focused on the teachers' plans for a lesson and how they perceived making modifications to lesson plans. The planning simulation involved a think-aloud task in which the participants planned a lesson with four objectives related to Geneva public school's language arts curriculum. The

researchers coded transcripts of the interviews and simulations for the two types of time, and they provided examples of coded text, increasing the credibility of the coding process. They counted the frequency of the codes, and they mapped a cluster analysis of the participants' codes using Benzecri's method to make a two-dimensional graphical representation of the results.

The researchers found that, although there was variation in the role time played in individual teachers' discussion of teaching, experts had a more synchronic view of time. Experts were more comfortable with changes and more flexible when the planned instruction required changes. Both experts and novices struggled planning for time, but experts avoided this by having only tentative plans. The researcher concluded this flexible approach to time enabled them to be more responsive. Because of thorough description of the data collection and analysis, and the supportive evidence the researcher presented from the transcripts these conclusions appear trustworthy.

In another study of expertise, Gudmundsdottir (1991) explored one expert English teacher's practice and thinking using the model of pedagogical reasoning and action (Gudmundsdottir & Shulman, 1987). This model presents two components of knowledge: process and logic. The process component includes five phases of reasoning about pedagogy: comprehension, transformation, instruction, evaluation, and reflection. The logic component includes seven categories: pedagogical content knowledge, content knowledge, general pedagogical knowledge, curriculum knowledge, knowledge of learners, knowledge of educational contexts, and knowledge of educational aims.

Gudmundsdottir (1991) included a single participant from a larger study (Gudmundsdottir & Shulman, 1987) that focused on the development of teachers'

pedagogical content knowledge. This teacher was identified as an expert because she had taught for over 20 years, had degrees in her content area, and had been recommended by her school's principal for her teaching experience. Gudmundsdottir used five interviews, 20 transcribed lessons, and the accompanying field notes, in addition to other collected documents. Gudmundsdottir coded the transcribed interviews and lessons, identifying instances of the five phases of the process component and the seven categories of the logic component of the model of pedagogical reasoning and action. The coded data were then used to write a case study of the teachers' pedagogical reasoning.

Gudmundsdottir (1991) reported that the teacher described a model guiding her instruction. This model was based on the types of questions she used to help students comprehend literature: (a) translation, in which the teacher asks the students to give her the literal meaning; (b) connotative meaning, in which the teacher asks the students to explain what the text means and to describe a character; (c) interpretation, in which the students interpret the meaning of the text and what the author is trying to convey; and (d) application and evaluation, in which the students think about what the literature means for their own lives. Gudmundsdottir observed the teacher's instruction, coding each question using the teachers' purposed model. He found that she was in fact using a different model of questioning than she purported. The model she was using did not include connotative meaning questions, but did include the remaining three types of questions existing at lower and higher levels of comprehension: translation type questions were on a lower level of comprehension; interpretation and application/evaluation questions were on a higher level of comprehension.

The researcher concluded that it was not the teacher's stated model but the second pedagogical model that was central to her pedagogical content knowledge, influenced all of the other categories of knowledge, and guided how the teacher interpreted her experience and reasoned about teaching and students. Although Gudmundsdottir's (1991) conclusions were supported by the presented evidence, the final conclusion that this model connected the teacher's actions to the two components of the model of pedagogical reasoning and action was not substantiated by the presented evidence, making the findings of this study less trustworthy.

In yet another study using Shulman's (1986) theory of pedagogical reasoning, Jay (2002) explored the similarities and differences between novice and expert English teachers. In this study Jay focused on the process of reasoning about pedagogy, which includes six phases: comprehension, transformation, instruction, evaluation, reflection, and new comprehension. Jay asked the following three questions: (a) What are the intellectual processes underlying different activities of teaching? (b) What is the role of knowledge and experience in their various processes? and (c) How do the different characteristics of expert and novice teachers affect facility in pedagogical reasoning?

Jay (2002) included two participants: one expert and one novice. The expert teacher had 15 years of experience, "demonstrated facility and skill in planning and teaching," and "a successful track record for helping students attain established learning goals" (Jay, 2002, p. 65). The latter two criteria were determined by observations and recommendations from colleagues; education and training, typically considered important in selecting expert teachers, were not considered (Palmer et al., 2005). The novice teacher was a preservice teacher with no prior teaching experience. Data included the transcripts of the teachers' participation in a think-aloud task and of a

follow-up interview. During the think-aloud task, each teacher observed a taped lesson of a 7th-grade language arts lesson on writing. The teachers were asked to pause the tape routinely to report their thoughts. In the follow-up interview, the teachers elaborated on their thoughts and answered questions regarding how they would plan the lesson. The researcher coded the transcripts using terms associated with other studies of expertise, such as interpretation and analysis. They then mapped these codes onto the model of pedagogical reasoning. Details regarding how they identified the important terms to code and how they mapped these terms onto the model of pedagogical reasoning were not given. Two case studies of the teachers' reasoning were presented.

Jay (2002) found that the novice and expert teachers both developed an understanding of the instruction in context, and related this to engaging in the comprehension process of Shulman's (1986) model. They critiqued the lesson in very similar ways and made similar suggestions for improvements. Jay identified this behavior as engaging in the transformation process of Shulman's model. Jay found differences between the ease with which the novice and expert moved from one process to another. The novice went step by step, first describing; then interpreting, analyzing, and critiquing; and then making suggestions for how to improve the lesson. Conversely, the expert jumped back and forth between the different processes and went further in the transformation process, offering multiple lesson ideas and adjusting the instruction for the specific students.

Jay (2002) concluded that the expert teacher's knowledge and past experiences explained why the expert teacher was able to address the students' needs and to move through the processes more quickly. Jay concluded that these findings were consistent

with other research of expert teachers' thinking, but the lack of details regarding the data analysis make the conclusions of this study less trustworthy.

Implications. The research on teacher expertise in English language arts is the most well-developed. In the four studies I have described, there were some findings that could be useful to future research on expertise in this area. First, flexibility seems to be a marker of expertise. In both Tochon and Munby (1993) and Jay's (2002) studies the researchers found that expert teachers' discussion of various aspects of teaching reflected more flexibility. In Jay's study, flexibility was reflected in the experts' ability to offer multiple lesson ideas and adjust the instruction for the specific students. In Tochon and Munby's study experts were more comfortable with changes and more flexible when the planned instruction required changes, having only tentative plans, and this flexible approach to time enabled them to be more responsive. Future research in expert English language arts teachers might explore further the concept of flexibility. Second, Gudmundsdottir (1991) found that the teacher's description of the pedagogical model guiding her reasoning was inconsistent with the model Gudmundsdottir identified as implicit in her instruction. This incongruence is consistent with other research on expertise, which has found that experts often are unable to speak explicitly about their practice, because much of what they do is automatic. Future research on expertise should to pay close attention to how to de-automatize such explanations of practice, as this can impact the ability of the researcher to accurately assess their cognition.

Mathematics

Livingston and Borko (1990) explored whether novice and expert secondary mathematics teachers' thoughts and actions during a review lesson differed, and whether these differences were related to their knowledge structures. The researchers

used two theoretical frameworks to explore the teachers' thinking: teaching as a cognitive skill and teaching as improvisation. The first framework, teaching as a cognitive skill, included both the concept of schema and pedagogical reasoning. Schemata are abstract knowledge structures, developed from experience, that summarize, organize, and find relationships between cases. Pedagogical reasoning is the process by which teachers transform subject matter knowledge into forms comprehensible to their particular students. The second framework employed in data analysis relied on Yinger's (1987) concept of teaching as improvisation. During improvisational teaching, the teacher works within a basic plan, not a detailed lesson plan or script for teaching. Instructional actions are responsive to students and are pulled from the teacher's extensive knowledge of routines and patterns for teaching. Researchers explored the differences between teachers' thinking and actions, looking at how both teaching as a cognitive skill and teaching as improvisation could explain such differences.

Participants in Livingston and Borko's (1990) study included two novice teachers who had mathematical backgrounds and were recommended by their teacher education professors. The two experts were classroom teachers who had been identified as experts by their school principals based on their students' achievement and their teaching performance; the experts were also recommended by the county teacher center coordinator and a university faculty member. Other criteria typically considered important in selecting expert teachers, such as training or years of experience, were not considered (Palmer et al., 2005). For each participant, researchers conducted one observation of a lesson, as well as a pre-observation interview to explore the teacher's planning process and a post-observation interview to explore the teacher's evaluations

of the lesson. Additional data sources, such as lesson plans and classroom materials, were also collected. The researchers used ethnographic procedures to analyze data, identify domains, and create a taxonomy of statements and behaviors within each domain. The researchers gave a very clear description of the data analysis and included quotes from the interviews to elaborate upon the descriptions, though examples of the domains would have been helpful. The researchers then looked for disconfirming explanations or actions that contradicted the domains to ensure that the patterns they had identified were not based on their preconceived thoughts about expertise. The use of disconfirming evidence further strengthened the analysis.

Livingston and Borko (1990) found many differences between the novice and expert teachers' thoughts and actions. The experts discussed relationships between mathematical problems, were responsive to students, and had a more comprehensive approach to the content. Novices' explanations were accurate but focused more on procedures than on concepts. The novices were unable able to link content concepts to one another. The novices were also not responsive to students.

The researchers concluded that both theoretical frameworks explained the differences between novices and experts. The experts appeared to have more flexible plans, and they adjusted them easily because of their well-developed schemata. They improvised their instruction based on students' comments and questions, and they easily selected strategies and routines in response to students' comments and questions. The novices, on the other hand, exhibited limited pedagogical content knowledge about students' learning. For example, they did not know which common misconceptions students were likely to have. They were less able to access their knowledge flexibly. They were less skilled at improvisation and had trouble coming up

with responsive explanations when students needed more information or were confused. Due to the detail given regarding the analysis and the use of disconfirming evidence, the researchers' conclusions seem trustworthy.

Even, Tirosh, and Robinson (1993) explored the differences between expert and novice 7th-grade mathematics teachers' "connectedness" (Even, et al., 1993, p. 50). According to the researchers, mathematical thinking is based on the ability to recognize patterns and the relationships between concepts and procedures; making connections is an integral part of mathematical knowledge and fundamental to effective mathematics teaching. Thus, the researchers explored how teachers made connections across concepts, representations, topics, and procedures, as well as within different lesson segments and within multiple lessons.

The study included three participants: one expert and two novices. The expert had more than 15 years of experience and a strong reputation among students, teachers, and other experts in mathematics education, though what qualified the other experts as such was not indicated. The novices were in their second year of teaching. Education and training, a criteria for expertise typically considered important in selecting expert teachers, was not considered (Palmer et al., 2005). The collected data included an unspecified number of lesson plans, observations, and post-lesson interviews focused on teachers' reflections and events in the lesson. The sole detail that was provided regarding data analysis was that the data were transcribed. The lack of description of the data collection methods and analysis is a weakness in this study.

The researchers found that the expert made connections while both planning and conducting the lesson. Lesson segments were connected to each other conceptually, and the content in the lessons was connected to content taught previously. The expert

teacher was also responsive, modifying instruction in response to students' needs. In reflecting on the lesson, the teacher commented on the importance of connections in mathematics. The novices, on the other hand, did not display an ability to make connections in either planning or teaching the lesson. Lesson segments were not connected to each other conceptually, and there was very little connection between the content of the lessons and content taught previously. Furthermore, the novices were not responsive to students' needs; sticking strictly to their lesson plans, they did not make modifications during instruction. When reflecting on their lessons, the novices had two different views of the need to make conceptual connections in mathematics. One considered it to be a waste of time, and the other had not thought about the importance of making connections but was receptive to doing so. Both worried that taking time to make connections would derail the lesson and prevent them from covering the content of the lesson.

The researchers concluded that the difference between the expert and the novices was in their knowledge and its use. Because the results did not show how the teachers used their knowledge, the researchers' conclusions about knowledge seem unsubstantiated by their findings. Thus, the researchers' conclusions should be interpreted with caution.

Implications. Although the research on teacher expertise in secondary mathematics classrooms is not extensive and is uneven in quality, there are some findings that may be relevant to future research in this area. First, the concept of flexibility, which has emerged in many other domains, appears to be relevant to studying expert secondary mathematics teachers. What is unique about research in mathematics is that Livingston and Borko (1990) conceptualized flexibility as

improvisation that allows the teacher to respond to students' needs. In future research in mathematics teacher expertise, Livingston and Borko's concept of improvisation might be useful in understanding the flexible approach teachers have to lesson planning and responsive instruction. Second, making connections, or connectedness, appears to be an important concept for the domain of mathematics, as expert secondary mathematics teachers are better than novices at designing lessons that connect concepts within and across lessons (Even et al., 1993; Livingston & Borko, 1990). Future research in mathematics teacher expertise should consider exploring more than one lesson for each participant, as this may not give us a complete understanding of teacher expertise in mathematics.

Science

Sabers, Cushing, and Berliner (1991) assessed differences between novice, advanced beginner, and expert secondary science teachers in their perception, monitoring, and evaluation of classroom events. The researchers used Doyle's (1986) concepts of simultaneity, multidimensionality, and immediacy to design an experimental task. In a classroom, a large number of events (multidimensionality) occur at the same time (simultaneity), and they happen at a rapid pace (immediacy).

Researchers selected participants for this study from a pool of participants in a larger study of expertise (Berliner, 1986). The experts included seven secondary science teachers who had at least 5 years of experience in various secondary science classrooms, were identified by the school's superintendent and principal as experts, and were consequently observed and identified as experts by the researchers. Other criteria typically considered important in selecting expert teachers, such as education and training, were not considered (Palmer et al., 2005). The advanced beginners were

four secondary science student teachers and first-year teachers who had the “potential for becoming excellent teachers” (Berliner, 1986, p.66). No source was given for the evaluation of potential for becoming excellent. The five novices had no degrees or experience in education, but they had interest in teaching and had worked previously in a science-related field.

In an experimental task, participants observed three monitors on which different perspectives of the same classroom lesson were presented. Only one monitor included video and sound; the others presented the video with no sound. The participants completed the following tasks: (a) answer questions related to the instructional and classroom management strategies and techniques observed on all three monitors; (b) do a think-aloud task while viewing the three monitors, identifying which monitor they were paying attention to; (c) respond to questions about the observed routines, content, motivation, learning environment, students’ attitudes, teachers’ expectations, roles, critical thinking skills, and the relationship between the student and the teacher; and (d) answer yes-or-no questions about events that occurred, identifying which monitors displayed those events. The participants stopped and started the monitor while completing the tasks.

Data were analyzed using mixed methods. First, the interviews and think-aloud tasks were coded using the Doyle’s (1986) three concepts: simultaneity, multidimensionality, and immediacy. Second, percentages of the codes were calculated, and then ANOVAs and Kruskal-Wallis procedures were used to analyze the variance between the groups’ codes. ANOVAs were also used to analyze the monitor position and the number of correct answers to the yes-or-no questions. Qualitative analysis was used to clarify and elaborate upon the quantitative findings.

The researchers found that the experts, advanced beginners, and novices differed in their interpretations of classroom events. The experts in this study scanned all three monitors, whereas the novices and advanced beginners primarily viewed only the middle monitor. The experts were able to integrate both visual and auditory information, discussing the instructional language the teacher used as well as visual cues in their comments about classroom events. The novices and advanced beginners used only visual cues as the basis for their comments and did not attend to the language the teacher used. The experts' comments were more elaborate, evaluative, and analytical; they developed hypotheses for student behavior and offered solutions for the problems they identified. The novice and advanced beginners' responses were descriptive and showed little interpretation.

The researchers concluded that it was the experts' experience that made them experts, because the experts and advanced beginners had similar educational backgrounds. They proposed that other literature (i.e., Livingston & Borko, 1990) on expertise found that experts had more elaborate schemata, developed through the repeated exposure (Chase & Simon, 1973) that non-experts did not have. This conclusion was unsubstantiated by this study, as too little information was provided regarding the educational backgrounds of the participants. Although the findings of this study appear to be reliable due to the stronger research design and analysis, the final conclusion, that experience is the fundamental difference between experts and non-experts, should be interpreted with caution.

Moallem (1997) explored one expert secondary science teacher's reflection on her teaching. Drawing on various theories of reflection, such as Dewey's (1933) reflective thinking, Schon's (1987) reflection-in-action, van Manen's (1977) levels of

reflection, and research from cognitive psychology regarding self-monitoring and metacognition, Moallem saw reflection as the device through which teachers' knowledge can become integrated and connected to past experiences, helping teachers develop their knowledge and become expert teachers. Reflection can take place during a lesson, which is referred to as reflection-in-action, or at other times, as is reflection-on-action. Moallem (1997) asked seven questions:

1. How does the teacher think about her practice?
2. To what extent does the teacher engage in reflective teaching?
3. What classroom events stimulate the teacher's reflective teaching?
4. What are the sources of information that the teacher attends to in order to make sense of an event that she perceives to be unique?
5. To what issues is the teacher sensitive when responding to a dilemma?
6. What is the relationship between the teacher's beliefs and her values, reflection, and action?
7. What effects does reflective thinking have on interactive and future teaching? (p. 143)

Moallem (1997) used the following criteria to select the participant: The teacher had (a) a degree in the subject matter and a graduate degree in education or the subject matter, (b) no serious discipline problems in her classroom, (c) 7 years of classroom teaching experience with 3 in the same context, (d) acceptance by her peers and students, (e) knowledge of curriculum and organization, (f) the respect of the principal of the school, and (g) demonstrated competency in classroom observations. These criteria are typically considered important in studies of teacher expertise (Palmer et al., 2005). The researcher observed the participant's classroom every day for 3 months and interviewed the participant before and after each classroom observation. In the final month the researcher and participant met weekly to review video of the

participant's teaching and to discuss the participant's thoughts and reflections. These meetings were transcribed and analyzed. Additionally, 10 weeks of classroom observation were transcribed for "microanalysis" (Moallem, 1997, p. 145). Moallem did not provide further details of the analysis and microanalysis, though she supported many of her interpretations with evidence from the transcripts.

Moallem (1997) found that this teacher used reflection before, during, and after a lesson to make sense of new information. When a new situation arose, the teacher identified the features primarily by the contextual information she chose to focus on, and she interpreted and made judgments about the situation based on past experiences. Additionally, Moallem found that the students' learning needs, the teacher's performance, and the subject matter were the basis for the teacher's reflections. The teacher paid close attention to the students' responses during instruction, modifying the instruction according to her judgments and reflections on past experiences. The teacher believed students should be active during a lesson, and when students were quiet she reflected on the appropriateness of the activity she had chosen. Furthermore, she had implicit goals for the content, and she assessed students' learning of the content and how much content was covered in a lesson.

The researcher concluded that the teacher demonstrated both types of reflection, reflection-in-action and reflection-on-action, but that the complexity of the teacher's thinking during the two types of reflection was different. In order to reflect-in-action the teacher must have attended to information about what was occurring in the classroom, identified a number of strategies, and selected from the many alternatives. Reflection-on-action, on the other hand, was less demanding but still an important part of learning. Although the findings of this study demonstrated the important role reflection played in

this expert teachers' thinking, the researcher's final conclusion that reflection played an important role in learning was overreaching, as it was not addressed in the study, and learning was never defined.

In a second analysis of the same teacher described in the prior study (Moallem, 1997), Moallem (1998) examined the teacher's thinking processes about teaching within the context of the classroom. Moallem (1998) compared the findings to microinstructional systems design models, which are models for thinking and planning designed to help teachers determine what should be taught and how to effectively teach. There are the following phases in microinstructional design models: (a) analysis, (b) design, (c) development and implementation, and (d) evaluation and revision.

Moallem (1998) asked the following five questions:

1. What is the content and source of teachers' knowledge and beliefs, and how do particular experiences relate to teachers' thoughts, actions, and reflections?
2. What are the components and processes associated with planning, and what types of planning do teachers use?
3. What aspects of the context influence teachers' thinking and teaching, and what do they attend to in the context?
4. What is the content and nature of reflection and how does reflection influence thinking and teaching?
5. What is the relationship between planning, teaching, and reflection?

In this study, Moallem (1998) used the same criteria for selecting the participant that she used in her prior study (Moallem, 1997). Further details regarding the teacher were provided. She had 19 years of experience. Along with having been recommended by numerous people, she also was the head of the science department and was the teacher of the researcher's child. Furthermore, the same data from Moallem's (1997) other manuscript were included. The data were analyzed using the

constant comparative method. Explicit description of the data analysis was provided, as well as evidence of triangulation and excerpts from the transcripts.

Moallem (1998) found that the teacher's past experiences were related to how she saw herself, her students, and her instruction and were a significant source of her professional and pedagogical knowledge. This teacher demonstrated different categories of knowledge: knowledge of self as a teacher, knowledge of the content and curriculum, knowledge of pedagogy, knowledge of students, and knowledge of the context. Each type of knowledge played an important role in the teachers planning, instruction, and reflection. She was able to predict students' success with the content and her instruction, and this prediction influenced how she planned, taught, and reflected. She organized her planning by day, by unit, and by year, each nested within the next. The teacher was able to continuously evaluate her instruction while planning and, when needed, to flexibly adjust her instruction, which involved planning within the act of teaching. Finally, she engaged in planning while reflecting after the lesson. Furthermore, she simultaneously balanced numerous sources of information when making instructional choices, such as contextual information, various goals for the instruction, information about the students, and instructional strategies.

As the goal of this study was to compare the teacher's thinking and teaching to models of microinstructional design, Moallem (1997) concluded that the model of thinking and instruction she produced from this teacher was much more complex than the microinstructional design and could be used to inform such models. Because Moallem supported the findings with extensive evidence from the transcripts and examples from observations, as well as providing a strong description of the data collection and analysis, the findings of this study appear trustworthy.

Meyer (2004) investigated preservice, first-year, and expert teachers' conception of prior knowledge and how their conception of prior knowledge influenced their practice. Using Akerson, Flick, and Lederman's (2000) interpretation of Kelly's (1955) theory of personal constructs as the basis for the theory of expertise, Meyer hypothesized that teachers' prior knowledge of teaching would influence their understanding of students' prior knowledge and therefore influence their instructional practice. According to Meyer, Kelly's theory of personal constructs proposed that human beings' basic psychological function is to organize experiences into themes that can be used to predict the future based on how similar or different events are to prior experiences. Prior knowledge helps to organize thinking. New experiences are integrated into prior knowledge; in turn, the prior knowledge becomes the basis for the inferences human beings make about the new experiences. This creates a "stable worldview" (Meyer, 2004, p. 971). According to Meyer, novices have limited background knowledge, as a result of their limited experience teaching, and therefore are less able to make sense of what happens in the classroom. Meyer was interested in exploring the differences in (a) what novice (preservice and first-year) teachers and expert teachers understood about the concept of prior knowledge and (b) if and how teachers' understandings impacted their actions in the classroom.

Two experts were selected from a group of mentor teachers the researcher had worked with previously. They each had a minimum of 10 years of teaching experience, a master's degree in secondary science, and experience designing and running science curriculum professional development. The two preservice teachers were enrolled in the researcher's science methods course, which emphasized the importance of using students' prior knowledge to inform science instruction. The two first-year teachers had

completed a post-baccalaureate teacher education program and had degrees in science. All of the participants were interviewed twice: once to discuss their conception of prior knowledge and once to talk about how they planned a lesson on density. Finally, they were observed once and interviewed post-observation. Numerous other data sources, such as self-assessments, planning materials, and classroom handouts, were collected for triangulation. The first interview data were transcribed and coded for the following concepts: (a) how students obtain prior knowledge, (b) the role prior knowledge plays in learning, (c) how teachers find out what students' prior knowledge is, and (d) how the teacher should use students' prior knowledge. The coded data was then compared to Kelly's (1955) personal constructs theory. Additionally, a running record was kept during the observation and second interview to identify which of the four codes were present. The researcher used comparative case studies to analyze the data, though exactly how the case studies were developed and compared was not described. Meyer (2004) did, though, support her interpretations of the data with many quotes from the transcripts.

Meyer (2004) found many differences between the expert and novice teachers' conceptions of prior knowledge. The novices' conception of prior knowledge was based primarily on their prior experiences teaching and was focused on the formal information students had about a topic. According to the novices, students' prior knowledge played a minor role in future learning, as it was the foundation upon which new information was built. If students had misconceptions, the misconceptions simply had to be corrected before new information was learned. When students had misconceptions, or did not know something the novices expected them to know, the novices had difficulty adjusting their instruction to accommodate this situation. The experts, on the other hand, believed

students' prior ideas and understanding were central to new learning. Prior knowledge was important because it showed how students put their ideas together. If students had misconceptions, the teacher had to show them a new way of thinking. Prior knowledge was important to new learning because new learning extended prior knowledge and increased students' ability to apply their learning in new situations.

Meyer (2004) concluded that expert teachers used questioning to assess students' prior knowledge, saw students' misconceptions as a normal part of instruction, adjusted their instruction based on the responses students gave, and were able to think flexibly about their lesson plans. Meyer also hypothesized that teachers' past teaching experiences were one factor, though not the only factor, in their ability to act in flexible ways. Although the final stage of the data analysis, the comparative case studies, was not thoroughly described, all of these findings were supported with evidence from the transcripts; therefore the differences Meyer found between novices and experts appear trustworthy.

Implications. Although there is limited research on teacher expertise in science, there have been some consistent findings that can inform future research on teacher expertise in science. Additionally, most of the studies on science teacher expertise appeared trustworthy, with the exception of Moallem's (1997) initial study. First, the role of teachers' experiences in the development of knowledge was fundamental to their teaching practice and to how they saw teaching. Moallem (1998) found that the teacher's past experiences were related to how she saw herself, her students, and her instruction, and they were a significant source of her professional and pedagogical knowledge. Although this was the only study to provide evidence for this conclusion, all of the other studies drew similar conclusions regarding the importance of past

experience (Meyer, 2004; Sabers et al., 1991). As such, exploring how experiences affect the teachers' thinking is very important in studies of expertise in science. Second, what teachers attended to in one study (Sabers et al., 1991), such as the students' responses and the teachers' language, was similar to the types of knowledge teachers displayed in other studies (Meyer, 2004; Moallem, 1998), such as knowledge of students and knowledge of instructional strategies. The expert teachers were able to integrate these knowledge bases, or types of information, into their observations, their solutions, and their predictions. This appeared to help them make flexible decisions. What knowledge teachers draw on and how that knowledge is integrated should be considered in future studies of expertise. Furthermore, the concept of flexibility was demonstrated across studies of expertise in science. Teachers frequently changed their instruction, and the reasons why they changed their instruction revealed a great deal about their thinking.

Special Education

Bartelheim, Nevada, and Evans (1993) conducted the sole study examining secondary special education teacher expertise. The researchers explored reflective thinking in expert secondary special education teachers' decision making during instruction using Schon's (1983) theory of reflective practice. The theory of reflective practice is a decision-making theory that consists of three components teachers use to make real-time instructional decisions: personal responsibility, problem setting, and testing. In addition to Schon's theory, the researchers used Kirby's (as cited in Bertelheim et al., 1993) indicators of reflective practice to inform their design and analysis. The researchers asked if indicators of the three components of reflective

practice are present when expert high school special education resource teachers actively make decisions regarding their classroom instruction?

The criteria used for determining expertise was as follows: The educators had a minimum of 5 years of teaching experience, certification in special education, and a recommendation from the district special education office and the school principal. The teachers' experience averaged 13.25 years. All of the teachers had participated in a mean of 36 hours of coursework in special education. Using Kirby's (as cited in Bertelheim et al., 1993) indicators of reflective practice, the researchers designed an open-ended interview protocol. Teachers were observed and then interviewed. Details regarding the students and the content of the lesson were not provided. Data were analyzed using content analysis, and transcripts were coded using three categories of reflective practice. Frequency counts of codes were calculated for individual participants and for the whole group. The use of frequency counts to determine the importance of a code was problematic. In a study with so few teachers, thorough and detailed analysis of transcripts may have revealed that although the problem-setting and testing codes appeared less frequently, they resulted in qualitatively different types of decisions than the codes that appeared more frequently.

The researchers found that 39% of the codes were attributed to personal responsibility. They found that teachers took responsibility for both their instruction and students' learning. Thirty-two percent of the codes addressed testing, and 29% of the codes addressed problem setting. Problem setting and testing represented how the participants responded to problems in instruction. In spite of the teachers' espoused beliefs about responding to instructional problems and the personal responsibility they felt, they did not change their instruction when problems arose. The researchers also

found that two participants were responsible for the majority of the coded practices. These teachers provided more insightful responses, were more willing to take risks, and felt more responsibility for the outcome of their changes to instruction. In contrast, the other two participants gave routine and surface-level responses, and they were less willing to take risks. No evidence was presented to support the claim that teachers' responses were more or less insightful. Interestingly, the researchers claimed that teachers with the most insightful responses were the two teachers with the least experience. The level of education did not explain the differences, as one of the participants with more superficial comments had acquired the highest number of special education credits.

The researchers concluded that the teachers' professional backgrounds did not contribute to the level of reflective practice they engaged in. They found that all of the teachers engaged in some level of reflective practice, but with the current study design the researchers were unable to determine whether the teachers engaged in the three types of reflective practice thought to play a role in teacher decision-making processes. The researchers acknowledged there were methodological limitations within this study. Furthermore, although the coding process was well explained, there were problems with the use of frequency counts for data from such a small sample and with the researchers' qualitative interpretations that were presented without evidence from the transcripts. Thus, the researchers' conclusions should be interpreted with caution.

Implications. Because there is only a single study on secondary special education teacher expertise, limited implications can be drawn from this research base. First and foremost, it is clear that this line of research needs to be explored more fully using stronger research designs. Second, the research suggests that expert secondary

special education teachers are concerned with students' performance and take responsibility for both their instruction and students' learning; however, concern about students' performance does not always result in responsive instruction. Bartelheim et al. (1993) found that in spite of the teachers' espoused beliefs about the need to respond to instructional problems and the personal responsibility they felt for doing so, they did not always change their instruction in response to problems. If future research in this area reveals similar incongruity between teachers' beliefs and practice, the underlying causes of such discontinuity should be explored.

Discussion

No literature reviews of educational research have explored the general or domain-specific characteristics of expertise within secondary education. This literature review was intended to fill this gap, primarily focusing on the domain-specific nature of expertise in secondary special education teachers and content area teachers. Although this analysis of each domain's research findings on secondary teacher expertise did yield some findings that were unique to each domain, there were many consistent themes that emerged across the domains.

First, the concept of flexibility emerged in every domain except social studies and special education. In English language arts, both Jay (2002) and Tochon and Munby (1993) found that expert teachers' discussions of various aspects of their teaching reflected more flexibility than novices' discussions did. In Tochon and Munby's study the expert teachers approached lesson planning and instruction in ways that enabled them to be more responsive to students during instruction. In Jay's study, expert teachers moved flexibly between different types of conversation about their own observations. In mathematics, Livingston and Borko (1990) conceptualized this

flexibility as improvisational in nature and as allowing teachers to act more responsively toward students. In science (Meyer, 2004; Moallem, 1998), expert teachers were able to make flexible decisions, and why they changed their instruction revealed a great deal about their thinking. Flexibility is an important concept across many studies of secondary teacher expertise.

Second, in two of the domains, expert teachers appeared to have a perspective or emphasis on a particular aspect of their content, and they were able to rationalize instructional decisions based on that perspective or emphasis. In social studies, teachers rationalized their teaching based on their understanding of the content (Brooks, 2010; Gudmundsdottir & Shulman, 1987). In English language arts, Gudmundsdottir (1991) found that the teacher had a pedagogical model that guided her questioning of students, though there was incongruence between the teacher's model and the model Gudmundsdottir thought was actually guiding her teaching. Although the importance of a perspective or emphasis and the ability to rationalize one's decisions emerged explicitly in only these two domains, other research hinted at their presence. Moallem (1998) discussed how the teacher's past experiences related to how she saw herself, her students, and her instruction, which could imply the presence of a perspective. Although this is not the most consistent finding across these studies of secondary teacher expertise, if researchers ask explicit questions related to a teachers' perspective or their emphasis, this may emerge in future studies as an important feature of expertise.

A third consistent finding was the importance of teachers' past experiences. Although many researchers speculated that the difference between their experts and novices was experience (Brooks, 2010; Gudmundsdottir & Shulman, 1987; Jay 2002;

Meyer, 2004; Moallem, 1998; Sabers et al., 1991), only Moallem (1998) supported this conclusion with evidence. Moallem (1998) found that the teacher's past experiences related to how the teacher saw herself, her students, and her instruction and that they were a significant source of her professional and pedagogical knowledge. Although experience is a feature of expertise (Palmer, et al., 2005), being able to make specific claims about the role experience plays in expertise requires that researchers include this construct in their analysis.

Finally, the role of knowledge in expertise was a consistent finding across all domains. Many researchers demonstrated that knowledge relevant to teaching was an important factor in the difference between experts and novices. Although some of the research findings were not substantiated by the data analysis used in the studies (Even et al, 1993; Jay, 2002; Rich, 1993), other studies included analysis of knowledge in the study designs and were able to draw conclusions supporting the importance of this feature of expertise. In mathematics, Livingston and Borko (1990) found that expert teachers had better developed schemata that enabled them to act more flexibly. In science, Moallem (1998) described in detail the types of knowledge the teacher demonstrated and how that knowledge influenced practice. Although knowledge, like experience, is often a feature of expertise (Palmer et al., 2005) these studies demonstrated that considering the role of knowledge in expertise is essential to drawing conclusions about it.

Challenges

As demonstrated by the studies that drew unsubstantiated conclusions about the role of knowledge and experience in secondary teacher expertise (Brooks, 2010; Even et al., 1993; Gudmundsdottir & Shulman, 1987; Jay, 2002; Meyer, 2004; Rich, 1993;

Sabers et al., 1991), there are methodological weaknesses associated with this literature base, making it difficult to draw conclusions about teaching expertise in each of the academic domains and special education or about teaching expertise in secondary education generally.

The first significant methodological weakness in this literature base was that the researchers often gave vague descriptions of the data collection and analyses. Furthermore, researchers often did not present solid evidence from transcripts to support their interpretations and conclusions. Thus, these researchers' interpretations of the data are questionable.

The second major methodological weakness in this literature base relates to how the researchers defined expertise in their studies. Many studies in this review failed to apply a consistent standard to the inclusion criteria for experts. This problem seems to be common in studies of teacher expertise. Generally, studies used a combination of reputation, recommendation, education, and years of teaching experience to identify expert teachers. According to Palmer et al. (2005), researchers' failure to use adequate criteria for identifying experts leads to a great deal of confusion within educational studies of expertise. Palmer and his colleagues recommend using the following four criteria:

1. Teachers should have three to five years of experience in a specific content area and with a particular population.
2. Teachers' knowledge should be reflected in certification and degrees in the field in which they are currently teaching.
3. Teachers should be recognized as exemplary by multiple constituencies, based on recent and relevant indicators of teaching effectiveness that include teacher knowledge and skills.
4. There should be documented evidence of teacher impact on student performance.

In this review, no studies met these standards.

Future Research

What is clear from this review is that the research in secondary content area teacher expertise and special education teacher expertise is variable in methodology, theoretical orientation, participant selection, and quality. Very few studies focused on the domain-specific nature of expertise in secondary education, and only one focused on expertise in secondary special education. Considering the increasing rate at which students with LD take content area classes in a general education setting, a study exploring the nature of expertise in special education content area teachers seems a timely and necessary next step in the study of expertise.

CHAPTER 3 RESEARCH DESIGN

Research Perspective

Qualitative research is traditionally used to explore, describe, and explain phenomena that are not adequately understood. The goal of both descriptive and exploratory qualitative studies is to “build rich descriptions of complex circumstances” (Marshall & Rossman, 1999, p. 33). Descriptive research is used to document and describe phenomena and can answer questions such as “What are the salient actions, events, beliefs, attitudes, and social structure and processes occurring in phenomena?” (Marshall & Rossman, 1999, p. 33). Exploratory research examines and detects “categories of meaning” (Marshall & Rossman, 1999, p. 33) and generates hypotheses for future research. Exploratory research can answer questions related to what is happening—such as “What are the salient themes, patterns, or categories of meaning?”—and describe how patterns are linked to one another (Marshall & Rossman, 1999, p. 33). This study used a descriptive and exploratory research methodology to describe how expert content area teachers conceptualized teaching literacy in their content area to secondary students with learning disabilities (LD).

Qualitative research techniques are appropriate when studying phenomena about which little is known (Stern, 1980). A qualitative approach was appropriate for exploring this topic because there was limited research focused on identifying and describing expertise in education. Specifically, there was scant research on expertise in both content area literacy instruction and teaching students with LD. Furthermore, qualitative methods can be used to “obtain intricate details about phenomena such as feelings, thought processes, and emotions that are difficult to extract or learn about through more conventional methods” (Strauss & Corbin, 1998, p. 11). This study

focused primarily on the thought processes of expert teachers, the meaning they attributed to teaching literacy within their content area to students with LD, and how they made sense of that meaning in terms of their instruction.

Theoretical Perspective

The epistemological orientation underlying this study was constructionism, which posits that meaning is constructed, not discovered. The construction of meaning begins when people consciously interact with objects in the world, and meaning develops and is communicated within a social context (Crotty, 1998). This study was designed to elicit the meaning expert teachers construct from their interaction with one particular phenomenon, teaching literacy within their content area to secondary students with LD, and how they communicate meaning, their conceptualization, within the social context of an interview. Furthermore, this study will show how such meaning develops through further interaction with the phenomenon during think-aloud and elicitation interviews, and how the teachers communicate this meaning during the social context of the interviews. The think-aloud and elicitation interviews both explored the teachers' perceptions of their experiences teaching literacy within their content area to secondary students with LD in the social context of the school and classroom, further reflecting the epistemological orientation of constructionism underlying this study.

The research question associated with this study represented the theoretical perspective of phenomenology. The question—How do expert secondary content area teachers conceptualize teaching literacy in their content area to students with LD?—was phenomenological in nature in that it focused on the meaning of lived experience, or “the world as we immediately experience it” (van Manen, 1990, p. 9). Phenomenological research aims to explain a phenomenon as it presents itself to the consciousness of the

participant, and to return to the “things themselves” as they are initially presented to us. The assumption behind phenomenology is that if we put aside our preconceived understandings of a phenomenon and “revisit” our experiences, new meaning emerges that will enhance our understanding of the phenomenon (Crotty, 1998, p. 78). The phenomenon studied was teachers’ perceptions of teaching literacy within their content area to secondary students with LD. New and enhanced understandings of the phenomenon could potentially lead to new practices and better professional development. As phenomenology looks at the meaning individuals ascribe to phenomenon, and proposes that meaning comes from interaction with the phenomenon, this grounds this methodology in the constructionist epistemology (Crotty, 1998).

This study used hermeneutic phenomenological methodology to explore teachers’ perceptions of teaching literacy within their content area to secondary students with LD. Hermeneutic phenomenology involves a process in which the researcher and participants work together to explore and develop their understanding of the phenomenon being studied. Koch (1995) states,

Hermeneutics invites its participants into an ongoing conversation... Understanding occurs through a fusion of horizons, which is a dialectic between the pre-understandings of the research process, the interpretive framework, and the sources of information. The implication for hermeneutic inquiry is that research participants are also giving their self-interpreted constructions of their situation (p. 835).

This co-construction of understanding, or fusion of horizons, occurs through a circle of readings, reflective writing, and interpretations (Gadamer, 1989). Hermeneutic phenomenological methodology is closely aligned with constructionism, as the co-construction of understanding, is constructionist. Furthermore, it requires the researcher to acknowledge the role of history and social influences on the interpretive

description of the individual's experience, to understand teachers' conceptualizations pre-reflectively. Finally, language plays a central role in hermeneutic phenomenology. Language is socially constructed (Aldiabat & Le Navenec, 2001) and is the means by which individuals communicate the meaning they attribute to objects (van Manen, 1990), further aligning hermeneutic phenomenological methodology with the epistemological orientation of constructionism underlying this study.

Site of Study

The site of study was a private school located in the suburbs of a large metropolitan city in the northeast United States. The school focused exclusively on educating children with language-based LD; their stated goal was to "help students develop the tools and strategies they need to achieve success in college and life." They did so by using the following strategies: (a) Combine intensive support and high expectations within a college preparatory curriculum; (b) Use proven research-based educational approaches to teach skills across the curriculum; (c) Empower students with technology, and use adaptive tools to meet students' needs; and (d) Help students to understand how they learn, and help them develop independence and self-advocacy skills. The average cost of attendance was annually \$36,300 for grades 6–8 and \$37,400 annually for grades 9–12. On average, 42% of students received tuition assistance. The school had 183 students, and the typical student:teacher ratio in content area classes ranged from 10:1 to 12:1. On average, 98% of students attended postsecondary 2- and 4-year colleges.

The school used Orton-Gillingham (OG) based interventions: multisensory and phonics-based with an emphasis on rules of the language. Teachers in the school underwent approximately 80 hours of OG training prior to their employment. Many of

the teachers also taught in the summer school program prior to employment, in which they applied their OG training in one-on-one intensive tutoring. Prior to every school year, teachers attended 4 days of professional development. Less formal in-service professional development occurred throughout the school year; curriculum developers and researchers, such as Judith Hochman, consulted with teachers to improve their practice. Many teachers participated in committees, such as the writing committee and the skills committee, dedicated to reading recent research and reviewing curriculum to continuously revise the curricular. The school's dedication to teacher training was evident in their employment of a full-time teacher-education coordinator.

Participants

Teachers were sampled from among the content area teachers for three subsequent grades (Grades 9, 10, and 11) in one secondary school, thus keeping the context of the school similar while varying the content area and grades. All of the teachers in this study fit Palmer et al.'s (2005) criteria for expertise. These researchers presented four criteria for selecting participants for studies of expertise. Participants should have (1) 3 to 5 years of experience teaching in a specific content area and with a particular population of students; (2) certification and degrees that correspond to the field in which they are currently teaching; (3) recognition by multiple constituencies (e.g., fellow teachers, researchers, administrators, teacher educators); and (4) documented evidence of their impact on student performance.

Three secondary content area teachers participated in the study: one 9th-grade social studies teacher, one 10th-grade English teacher, and one 11th-grade English teacher. Criteria 1 and 2 were determined by teachers' answers on a survey (Appendix A) that focused on their degrees obtained, courses taken, professional development

attended, and teaching experiences. They met the more stringent expectation for experience: more than 5 years of teaching in their content area and teaching students with reading disabilities. Teachers' experience ranged from 17 years of teaching, with 6 years of teaching at this particular school and in their particular grade and content area, to 34 years of teaching, with 24 years of teaching at this particular school and in their particular grade. The teachers who participated in this study had degrees and/or certification in their respective content areas. Teachers' education in their content area ranged from a bachelor's degree to a doctorate of philosophy. Both English teachers were certified in their content area, whereas the social studies teacher was not. Additionally, all participants had completed at least 80 hours of professional development focused on teaching literacy to students with reading disabilities. Furthermore, all participants had attended additional hours of professional development focused on methods in their content area, literacy instruction, and/or teaching students with reading disabilities. I determined Criterion 3 through the recommendation of two different constituencies within the school: the Assistant Head of School/Dean of Students and the Director of Teacher Education. Both of these individuals met the criteria for identifying experts; they had worked closely with the teachers and had observed their instruction numerous times. The students' scores on the Diagnostic Assessment of Reading (DAR) were used to determine whether their teachers met Criterion 4; the students' pre- and post-testing from the prior year had to meet a minimum requirement of more than 1-year growth.

Procedures

Following van Manen's method of phenomenology (1984, p.5) as presented in Figure 3-1, I engaged in an analysis that included four concurrent procedural activities

and consisted of 10 steps. The model was modified, as presented in Figure 3-2, to incorporate hermeneutic methods, and shows the exact steps I engaged in during the data collection, analysis, and writing.

Turning to the Nature of Lived Experience

Turning to the nature of lived experience is the first phase of van Manen's method of phenomenology (1984). This phase involved first orienting oneself to the phenomenon, teaching literacy within their content area to secondary students with LD. In orienting myself to the phenomena in question, I reflected on my own experiences as a secondary social studies and language arts teacher. I considered topics relevant to both students and teachers. Students with LD often face difficulties with reading content area texts and have difficulties demonstrating their knowledge when the expectation is to demonstrate their knowledge in writing. Teachers often are not trained to address the difficulties students with LD face in their classrooms, and with the movement towards inclusion they increasingly have students with LD in their classrooms.

After orienting oneself to the phenomenon, the second step in turning to the nature of lived experience is to formulate the phenomenological question. In forming the question I brainstormed potential topics, asking myself "if you had the training and experience, what would it be like to teach such students and what could we learn from expert teachers?" From a list of potentially relevant questions, I chose to focus this study on the phenomenological question: How do expert secondary content area teachers conceptualize teaching literacy in their content area to students with LD?

The third step in turning to the nature of lived experience was to explicating assumptions and preunderstandings, also known as epoché. Epoché, entails bracketing

prior knowledge, or setting aside theories, hypotheses, measuring instruments, and prior research. Epoché also requires engagement in phenomenological reduction, which involves abstaining from focusing on the phenomenon as independent of experience (Wertz et al., 2011). In order to address the concept of epoché in this study, I kept a reflective journal throughout all stages of the data collection and analysis. Throughout the interview process, I recorded thoughts about the phenomenon that were tied to experiences visited during the interviews. Before analyzing the data, I bracketed prior knowledge and conceptions about the phenomenon and recorded these in the journal. Upon reflection on the journal, I identified my own interpretations that seemed to reflect prior understanding rather than the transcripts of the interviews, and which seemed not to be tied directly to the experiences discussed in the interviews.

The Existential Investigation

The existential investigation is the second phase of van Manen's Method of phenomenology (1984). This phase involved first exploring the phenomenon. To explore the phenomenon, I looked back over my own experiences as both a secondary social studies teacher and a language arts teacher who specialized in literacy instruction for students with dyslexia. I struggled as a language arts teacher to contextualize reading interventions within the students' content area classes and coordinate this instruction to best support students in accessing the content in their classes. I struggled as a middle school social studies teacher to use what I had learned about the students reading disabilities to support their learning in my classroom.

I next obtained experiential descriptions from the participants. The data collection consisted of five interviews, in three different formats: an initial interview, two think-aloud interviews, and two elicitation interviews. First, I began with a more

traditional interview, which was designed to explore secondary content area teachers' pre-reflective understandings of the phenomenon. Second, as experts often automatize many of the cognitive processes they use (Ericsson, 2009) and often have difficulty making their thinking overt, I included two additional interview techniques. First, I situated the teachers' thinking within authentic tasks, such as planning. This method can reveal understandings that exist at a more subconscious level. Similar strategies, such as cognitive task analysis, have proven effective with expert teachers (Feldon, 2007). I also used taped lessons to promote reflection, so as not to depend on teachers' memory; dependence on memory has generated major criticism of the use of stimulated recall interviews in studies of expertise (Feldon, 2007). Detailed descriptions of all three interview formats are below:

Initial interview. The selected teachers participated in an initial interview (Appendix B). The purpose of the interview was twofold. The first goal was to elicit additional information, beyond that gathered in the survey, regarding teachers past and present experiences related to teaching students with LD, their content area, and literacy. The second goal focused on knowledge teachers had about their content area, content area literacy instruction, and their students.

Think-aloud Interviews. The selected teachers participated in two think-aloud interviews. In the think-aloud interviews (Appendix C) the teachers described their lesson planning process. During the interviews, I instructed the teachers to say out loud everything they were thinking as they prepared for their lesson. At the end of the think-aloud, I asked clarifying questions. Going through the motions of planning situated the teachers' knowledge within the teachers' authentic task of lesson planning. Research on think-aloud interviews has demonstrated that they provide a valid source of data

regarding participants' thinking, especially when the data are interpreted through a qualitative lens (Charters, 2003). From the think-aloud interviews I was able to learn about the teachers' thought processes as they planned for a lesson.

Elicitation interviews. After each of the think-aloud interviews I videotaped an observation of the planned lesson in the classroom and conducted follow up elicitation interviews. Prior to each elicitation interview (Appendix D), I reviewed the observation and identified the moments when I saw teachers supporting students' literacy needs. During both of the elicitation interviews, the day after the lesson was videotaped, both the participant and I watched the videotaped observation. In the elicitation interview, I instructed teachers to identify moments in the lesson that demonstrated the provision of instructional support for student literacy needs. I asked the teachers to elaborate on what knowledge they had been drawing upon, and on the source of that knowledge. Furthermore, I asked the participants to explain the rationale behind their choice of practice. I also pointed to the moments in the instruction that I had identified prior to the elicitation interview. By asking teachers to reflect on their teaching practice through watching their video, I situated their reflections and perceptions within their particular classroom contexts. From the elicitation interviews I was able to learn about the teachers' thought processes as they reflected on lessons.

The final step in the existential investigation is to consult phenomenological literature. I returned to the phenomenological literature, reading the writings of philosophers such as Merleau-Ponty (1962), Sartre (2001), and Heidegger (1968). It was from the writings of Merleau-Ponty and van Manen's (1984) interpretations of Merleau-Ponty's writings, that I would ultimately begin to organize my understanding of experience and perception. Humans, according to existential phenomenological

philosophers and researchers, perceive their experiences: across time (lived temporality), within space (lived spatiality), physically (lived corporeality), and interpersonally (lived relationality). I would attempt to describe within and across participants their conceptualization of the task of teaching students literacy within their content area, exploring how they expressed their conceptualizations in terms of how humans perceive experience.

Phenomenological Reflection

Phenomenological reflection is the third phase of van Manen's Method of phenomenology (1984). This phase involved first conducting thematic analysis of the data generated in the second phase. After transcribing the interviews, I used the existential themes to guide a line-by-line analysis of the transcripts, considering how time (lived temporality), space (lived spatiality), physical (lived corporeality, and interpersonal interactions (lived relationality) emerged in the participants discussion of their experiences.

From this analysis I identified predominant themes in the participants' experience, the second step of phenomenological reflection. I then narrowed the themes to those central to answering the research question – How do expert secondary content area teachers conceptualize teaching literacy in their content area to students with LD? The themes identified as central to the teachers conceptualizations were: (a) developing literacy skills with an eye toward the future; (b) understanding students' learning disabilities; and (c) designing instruction to further students' learning. I identified statements corresponding to these themes. Next, I reordered and combined the statements into an integrated description of how each individual teacher conceptualized teaching literacy within their content area to secondary students with

LD, connecting the teachers words with my interpretation of their words, creating a description of the teachers' lived experiences.

Hermeneutic Phenomenological Writing

Hermeneutic phenomenological writing is the fourth phase of van Manen's Method of phenomenology (1984). Hermeneutic phenomenology involves a process of readings, reflective writing, and interpretations (Gadamer, 1989). The circular process of reading, writing, and interpreting continued until the participants and I believed my interpretations had fully encapsulated the participants lived experience. Upon writing the first draft of the teachers' lived experiences, I returned to the transcripts, attending to the speaking of language and ensuring I was varying my selection of examples to best represent the participants' experiences. I read the transcripts repeatedly throughout the project to ensure that interpretations were tied to their experiences. van Manen (1990) emphasized that writing in and of itself leads to reflection. As such, the initial draft of the teachers' lived experiences was written during the analysis phase. Additionally, the use of a reflective journal is one way to engage a hermeneutic circle (Heidegger, 1968). During the data analysis, I used the reflective journal to brainstorm, write, and revise the interpretation being formed. Furthermore, to reach a fusion of horizons, numerous revisions to the interpretation were made. After forming the initial draft of the teachers' lived experiences during the analysis, I conferred with each participant, sharing his written interpretation. Based on the discussion with the participants, I revised my interpretation of the teachers' conceptualizations. Discussions of this nature continued until the participants and I believed my interpretations had fully captured the participants' conceptualizations.

Presentation of Findings

Included in this dissertation are extensive descriptions of the individual teachers' conceptualizations of the task of teaching literacy within their content area to students with LD. The findings of this study are presented in chapter 4, focusing on the teachers' conceptualizations of the phenomenon. To illuminate the individual cases, interview excerpts from each teacher are included in chapter 4. Chapter 5 presents a discussion of the findings, presenting implications for the study of teacher expertise in secondary literacy instruction in the content areas with students with LD.

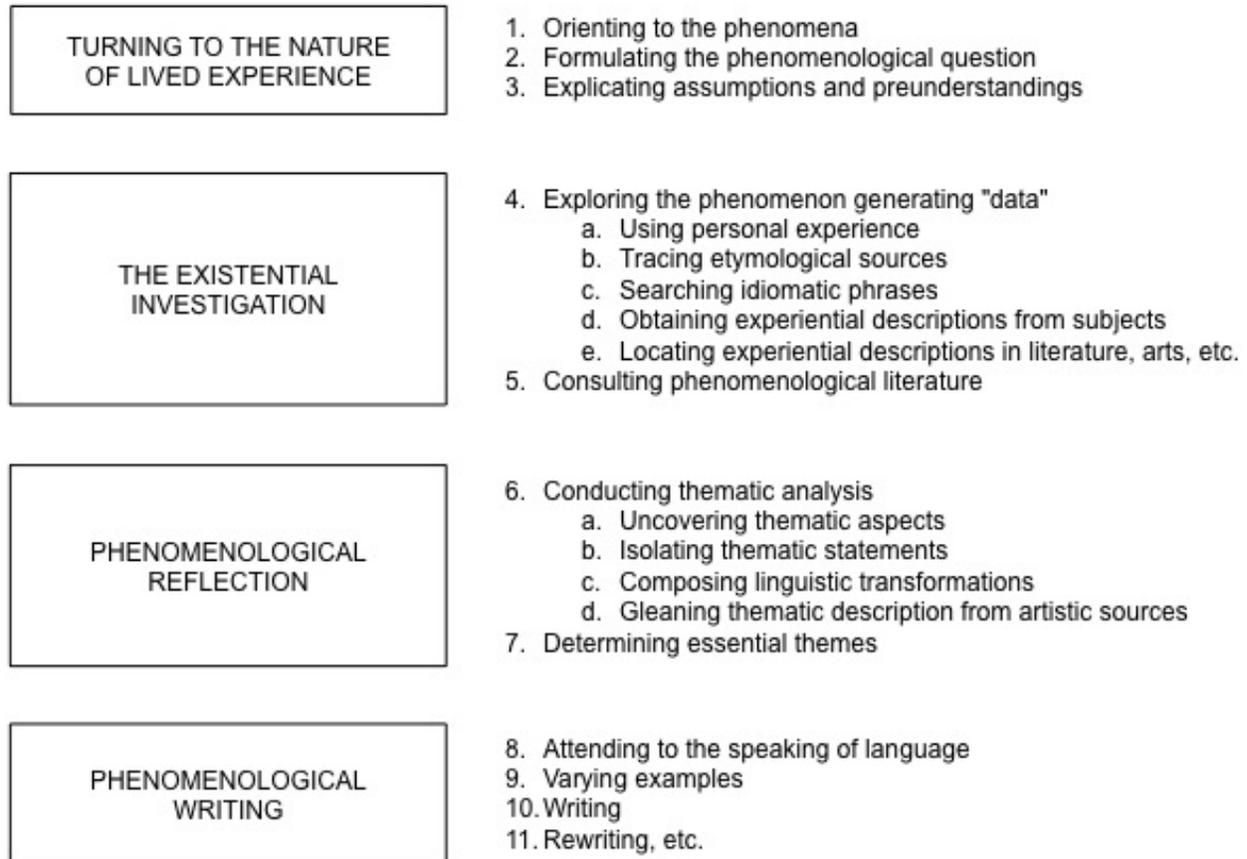


Figure 3-1. Model of van Manen's method of phenomenology (1984, p.5).

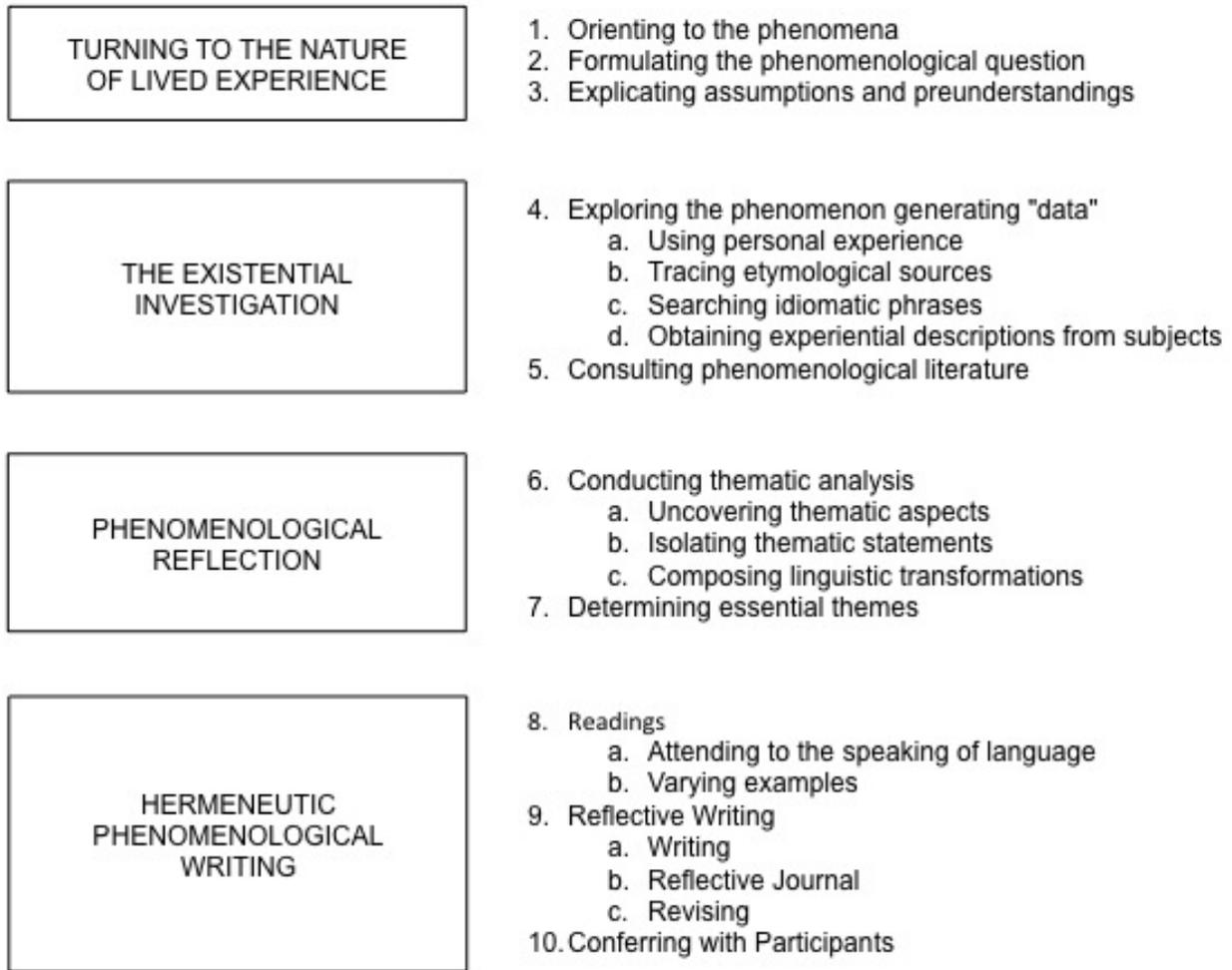


Figure 3-2. Modified model of van Manen's method of phenomenology.

CHAPTER 4 RESULTS

This study was designed to provide insight into the understandings and practices of expert content area teachers with specialized knowledge in teaching literacy to students with learning disabilities (LD), with the purpose of developing an understanding of expertise in teaching content area literacy skills to secondary students with LD. The research question this study addresses is: How do expert secondary content area teachers conceptualize teaching literacy in their content area to students with LD? The purpose of this chapter is to answer the research question by exploring the teachers' understanding of the phenomenon using hermeneutic phenomenological methods.

In this chapter I present profiles of the three teachers in this study: Wright, Geoffrey, and Teagan. Each teacher profile is comprised of (a) a description of the teacher's training and education, (b) a description of the teacher's classroom, and (c) a description of the teacher's lived experience. I derived descriptions of the teacher's training, education, and classroom from their responses to the initial survey, comments by the Dean of Students, who was also the Assistant Head of School, and comments by the Director of Teacher Education. I also integrated within these descriptions my observations of the teachers in the school while they went about their daily responsibilities, which included classroom instruction, committee meetings, and faculty meetings, as well as passing comments from students and teachers in the hallway between classes and at the school's graduation ceremony.

I derived the descriptions of the teachers' lived experiences from my analysis of my interviews with the teachers. The teachers' lived experiences reflected how they conceptualized their instruction, their framework for teaching. Specifically, their framework included their conceptualizations of (a) developing literacy skills with an eye

toward the future, (b) understanding students' learning disabilities, and (c) designing instruction to further students' learning. Following the three profiles of the teachers, I discuss the commonalities and unique qualities of the teachers' lived experiences, creating a cross-participant description of how these teachers conceptualized teaching literacy in their content area to students with LD.

Wright

At the time of this study, Wright had been teaching for 31 years; this was his 12th year at the school. Wright was an 11th-grade English teacher who had taught English exclusively for the past 7 years and had taught English and language arts for his first 5 years at the school. As was the case with many teachers in the school, Wright had a number of responsibilities beyond teaching. Wright was currently the head of the English department. In his role, Wright encouraged teachers to share their exemplary lessons with the department and required peer observations to help teachers develop their practice. Furthermore, Wright was the chair of the skills committee, which focused on continuously revising the school's strategic plan for developing students' basic academic skills. The skills committee focused on which skills were to be introduced, developed, and reviewed in each grade with the goal of preparing students to be successful in postsecondary education and training. As chair, Wright guided the committee to focus on current research when making such decisions. Wright was not just a leader but also a mentor. He was the teacher other teachers turned to for guidance. He was known as a "hard" teacher, holding high expectations for students, and was deeply respected by former students. In the graduation ceremony students often thanked Wright for his rigor and high expectations, and students often reflected on his class as the turning point in their development as scholars.

Wright's Preparation and Training

Wright obtained a bachelor's degree in English from Columbia University in 1979, a master's degree in creative writing from Boston University in 1989, and a doctorate in English from Boston University in 1995. He also held a teaching certificate in secondary English. The coursework for his bachelor's degree in English included 30–40 credit hours in college literature, the coursework for his master's degree focused mostly on writing, and the coursework for his PhD was entirely in literature. In addition to his preparation in English, Wright successfully completed at least two education courses in reading and writing. Furthermore, in the past year alone, Wright attended 32 hours of professional development in reading, 20 hours of professional development in writing, and 20 hours of professional development in English language arts. Although Wright had considerable content area expertise and training to be a teacher, he had never completed a course specifically dedicated to teaching students with disabilities; however, he reported participating in numerous professional development experiences in this area. He reported participating over the past year in at least 20 hours of professional development in teaching students with disabilities, and he reported attending over the past decade “20 conferences, plus 3 summer sessions on O-G [Orton Gillingham], plus innumerable in-school training programs” in teaching students with disabilities. Furthermore, Wright explained, “I am constantly reading research in the fields of literacy, LD, etc... While these are not ‘professional development’ in the sense of a being a course or presentation, being a PhD, I know how to do my own research...thousands of hours over the past decade...developing my own approaches and my own workshops...presenting my own workshops and presentations at regional

and national conferences.” Wright was driven to become more knowledgeable about students with LD.

Wright’s Classroom

Wright’s classroom was small and rectangular, with the entrance in the middle of one long wall. Directly across from the doorway was a wall of windows through which the sunlight poured, creating a bright atmosphere. The desks were arranged in a circle in the middle of the room, with students facing each other, much like the desks would be arranged in a college classroom in which students are expected to participate in discussion. The number and placement of the desks made it difficult to navigate the room. At the left end of the circle of desks was an opening where Wright could stand in front of the class.

Wright’s classroom was littered with artifacts revealing his approach to teaching literacy in his English classes. Upon most student desks lay a Webster’s Dictionary. Off to the left of the entrance wall was a whiteboard on which Wright listed the “Essential Questions” he wanted his students to consider when reading literature: (a) What is literature? (b) Why do humans create literature? (c) How do we know what literature means (when it doesn’t come out and tell us)? and (d) How do we explain why we think it means what it means? On the short wall to the left of the entrance was a wall-sized whiteboard over which a large screen rolled up and down. On this whiteboard were many notes about the novel the class was currently reading, *The Great Gatsby*, and how to structure a paragraph about it.

At first glance, Wright’s room might appear to be a disorganized pile of clutter, but closer examination revealed a classroom that was filled with literature. Wright’s desk, which stood directly to the right of the entrance, was full of papers and novels. He

also had bookshelves that were piled with haphazardly stacked papers and books. A copy of *The Great Gatsby* by F. Scott Fitzgerald, with many tagged pages and numerous notations written in the margins, lay on his projector. Students' writing was projected on a large screen for all to see. Wright used the projector to show student work as well as his notations and tagged pages in the books he and the students analyzed together. On the other short wall beyond the projector was another whiteboard, upon which was a large timeline of the life of the main character, Jay Gatsby. In spite of the small size of the classroom, the cramped placement of the desks, and the messy stacks of papers—all variables that might seem to detract from the productivity and efficiency of a class—Wright's students appeared to be engaged, transitioned between activities smoothly, and demonstrated the ability to independently locate materials and to follow directions written on the board. It was evident that Wright had well-established routines in place and that the slightly chaotic feel of the classroom reflected the vibrancy of the classroom rather than disorganization.

Wright's Lived Experience

Wright's framework for teaching included the following themes: (a) developing literacy skills with an eye toward the future, (b) understanding students' learning disabilities, and (c) designing instruction to further students' learning.

Developing literacy skills with an eye toward the future

Wright's framework for teaching included what Wright referred to as literacy "tasks" and "aptitudes" that students need to develop in a high school English course in order to succeed in postsecondary settings. When talking about what students needed, Wright always seemed to have an eye on the future:

The content of my course is organized to give them stuff that is intellectually complex, is something that kids outside of the school might have read or

encountered somewhere in their high school, preferably something at the sophomore, junior, senior level, and to give them some exposure to that level and kind of material...intellectually. I try to get them to be able to do the things that we want them to be able to do with literature in college-level courses.

Wright's knowledge of postsecondary settings emanated from his experiences in higher education. He had been a teaching assistant during his doctoral program and an adjunct professor of English prior to teaching at his current school. Wright described how his previous experiences enabled him to anticipate the expectations his students would confront in a freshman English course:

What I brought was the knowledge where they have to be...and you know, knowing the attitudes and ideas and proclivities of the people that are going to be trying to teach them those things, many of whom would say you're not ready for college, or you're not college material, rather than having any sense of knowing what their barriers are and knowing what they're capable of if they have the right kind of opportunities. So yeah, I have a real strong sense of what that freshman year is like, especially with the Freshman Comp programs that are almost universal now.

Wright's extensive experience as a student and professor of English likely acted as a guide for his instruction. This was evident in his ability to easily identify the skills he wanted to help his students develop. He listed five literacy tasks students should master to succeed in postsecondary settings. According to Wright,

[1] You need to be able to read something of a particular length and difficulty in a certain amount of time. For me that's an adult novel of say 250-300 pages in say 2 to 3 weeks. You need to be able to read *A Farewell to Arms* and *The Great Gatsby* in 2 to 3 weeks. [2] You need to be able to produce a paper that is based on something you have read, not out of your head, and is formal and analytical and polished and structured according to the sort of academic standards. You need to be able to do that...in a week...[3] You need to be able to read something and come to class ready to either participate in a formal discussion...with some idea of what you're [going] to bring to the table around that, and questions that you have...[4] You need to be able to listen to a lecture, a formal presentation and take notes and get something...retain that and put it back into the context of what you've read and help it to inform your reading of it. [5] You need to be able to take a test on something that you learned 3 months

earlier and be able to bring information and ideas back to bear over the long term.

Furthermore, Wright identified a sixth skill that was not consistently emphasized but was still present in the class. According to Wright, it was the ability “to be able to stand up and give an oral, formal presentation of say 10 to 15 minutes in length to a group on a topic that you’ve researched and put together.”

Wright also identified literacy aptitudes essential for students’ success in postsecondary settings:

You want them to be able to unpack one passage and sort of paraphrase it and close-read it like you would a poem... We want them to be able to tie those readings into the larger themes of the novel, and you want them to be able to tie the themes of those novels into the other pieces of literature within the genre or within bigger themes within Humanities and sort of see how this book operates in the larger picture... When we do *Gatsby*, the American Dream and what that is and how that operates in our larger society and how that looks today given our economy and how these class and social structures are and are not like they were in the 1920s... I’m trying to get them to think as intellectuals in that way, be able to close-read, be able to see the novel as a thing that operates in a larger environment and be able to think outside.

Wright’s framework for instruction consisted of learning literacy skills, or tasks and aptitudes that would assist them in their literature classes. The literacy tasks consisted primarily of literacy skills—such as comprehension, fluency, and writing—that are essential to students’ postsecondary success regardless of the content area. The literacy aptitudes consisted primarily of domain-specific literacy skills that are unique to the content of English classes. Wright believed that both these tasks and aptitudes are fundamental to students’ success in postsecondary English classes.

Understanding students’ learning disabilities

From Wright’s perspective, there was an important relationship between the types of difficulties students with LD experienced and their ability to tackle literacy tasks

and to develop aptitudes common to a high school English class. He described how the abilities of students with disabilities to perform the tasks associated with an 11th-grade English class, such as reading and notating text, were not as well developed as the abilities of typically developing students:

And this is the piece where this is the learning different groups...all of those things that most 11th-graders would have figured out how to do in a college prep program by you know...by 11th grade you would just be able to say, ok, I want you to go home and read this chapter and notate it and come back. And there are a fair number of our students that are capable of doing that on their own, but there are still many of them who are still developing those [abilities].

For example, Wright acknowledged the ways in which the texts his students were reading were particularly challenging for them. When discussing F. Scott Fitzgerald's *The Great Gatsby*, he explained,

We're reading stuff that is narratively and literarily complex. There's a lot of places where his poetic style and his diction is challenging for our students. He will tell things that happen here and here and expect us to be able to sequence those and put those back together simultaneously; all those are pretty big challenges for some of our kids, especially ones with working memory difficulties and then with reading difficulties and everything.

In response to questions regarding the difficulties he anticipated his students having, Wright described how each student's specific disabilities influenced their ability to perform tasks. For example, in reference to a writing task he had planned, Wright explained how the incongruence between Tom's reading, verbal, and conceptual thinking abilities and his writing fluency influenced his ability to perform:

Tom has had trouble finishing things...He's very verbal; he can tell you all about it, he understands it, he's got like 720 verbal reading scores so it's not about his understanding of it...It's about kind of the disconnect between how well he can write and spell...and his standards around how sophisticated his thinking is.

He also described how students might perform differently on tasks depending on their specific abilities. In the following example, Wright explained how Morgan's abstract

thinking ability influenced his ability to analyze novels and his performance on analytical tasks related to the novel:

Morgan...has a real hard time thinking about novels. Oftentimes he will...do something sort of parallel to the kind of analysis that the rest of them are doing...He'll sort of come up with a more concrete...more about history or about something that he can quantify or get facts on rather than about character and motivation. So you know, that's where understanding that that's the way some people process the world and that's good enough; it's not going to change and...Right, they're still producing a piece of writing that has quotations from the novel and documents something.

Wright used this knowledge of the students' difficulties to guide instruction. In the following quotation, Wright reflected on a lesson in which the class was reading the novel *The Great Gatsby* aloud and discussing the text. In the lesson, the text was projected on a screen in the front of the class, and Wright flipped back and forth between two pieces of text, discussing how the narrator perceived Jay Gatsby:

This is one of the things that...they don't have a good sense when language is being repeated, when something is phrased in almost identical ways. And so I'm always trying to say...it says...back over here he had said there was an indefinable expression that passed over Gatsby's face, and then here he says...and the fact that this is separated... These students have more difficulty making those connections than more proficient readers. So I'm showing them that this referred... that this is defining what this is and this refers to this, making those connections for them.

Wright explained that students with LD have difficulties seeing patterns in the text and making connections within the text, so he modeled for students how these two pieces of text were connected by showing the students how one specific piece of the text referred to another specific piece of the text and defined it.

Throughout the various interviews, Wright addressed how the various difficulties students with LD encounter—such as weaknesses in background knowledge, making connections, sequencing events, and writing fluency—interfere with their ability to perform and develop the necessary literacy skills.

Designing instruction to further students' learning

Wright believed that his knowledge of the students' needs helped him design instruction that either enabled students to develop the skills they needed to succeed in a postsecondary setting or enabled them to compensate for their deficits:

I make a distinction between remediation, compensation, and accommodation. I always try to keep those things clear in my mind, which is which. They're not the same thing. By the time they come into 11th grade we're probably not going to get a lot of bang for our buck out of remediation unless they're really new to our school. Accommodation is something that needs to start phasing out, so I put my eggs in the compensation basket. If you can't do this on your own, how are you going to compensate for that? What help are you going to need? ...And then what are the things that we haven't been able to remediate and I don't know of a compensation for, so then what are the accommodations that you're going to need? ...[You are] going to have to manage those negotiations around the expectations of college and professions.

To accomplish the goal of “bridg[ing] the gap” in skills and “giv[ing] them access to the texts whether or not they had those skills,” Wright’s instruction integrated (a) assessing students’ abilities in order to evaluate where their skills were and to determine what gaps existed in the students skills, (b) identifying strategies to help students develop the literacy skills needed or compensate for deficits in these skills, and (c) supporting students’ access to more demanding content. Wright’s instruction focused on reading, writing, and disciplinary literacy. The following section will explore how Wright designed this instruction to further students’ learning, bridging the gap between their current skills and the literacy skills Wright deemed essential to their success in postsecondary settings.

Reading. Fluency and comprehension instruction, according to Wright, were essential to his students’ success and were a central focus when he planned and implemented instruction. Fluency was an important skill, as it affected students’ ability “to be able to read something of a particular length and difficulty in a certain amount of

time.” Reading comprehension instruction was also essential, as it affected a students’ ability “to read something and come to class ready to either participate in a formal discussion...with some idea of what you’re [going] to bring to the table around that, and questions that you have.” Wright’s reading instruction focused primarily on fluency and reading comprehension.

Wright identified fluency as an essential literacy skill for the course he taught:

I read all the research as to what makes good readers in the National Reading Panel report, and I started getting very interested in fluency in particular because that seemed to be ...a real difficulty for [my students]. Most...are not non-readers; they’re slow, labored readers.

According to Wright, when students had poor fluency it influenced how their “brain...hears the language” and subsequently affected their comprehension.

Furthermore, Wright believed that not only rate and accuracy but also prosody affected comprehension:

Most of our students...many of them...No, I’ll take that back. Most of them can read with a fair degree of accuracy. Their speed is variable but generally about 150 words a minute on average. Their prosody is horrible, and it’s the phrasing that slows comprehension. The more I listen to the students reading and the more I’ve read about fluency and really looked into it, it’s hard to quantify prosody, but I think it’s really the key to comprehension.

Wright used ongoing student assessment to better understand his students’ skill levels and to inform his instruction. One example that emerged was his use of fluency assessment to identify the degree of support students needed in reading. According to Wright, he measured students’ fluency at the beginning of the year:

At the beginning of the year, I have them do a 400-word passage aloud; then I...mark it for its errors and get words correct per minute; and then I score it on a scale that measures their phrasing, their intonation, and their evenness or smoothness in which they read and put that all onto a

spreadsheet. I have a formula that...comes up with what I think is a measure of how fluent they really are. That includes both those quantitative and qualitative dimensions. I check that against their silent reading, because some read quicker silently.

Wright then used this information to determine what degree of support students needed:

I use that information to divide them into three categories: people that probably don't need audio, people who might benefit from it particularly for speed, and people who have to have it—they're not going to make it if they don't use it.

Wright then incorporated the supportive strategy, audio recordings of the text, into his instruction to address students' needs:

And then I go about teaching and training the whole class how to use audio, and we use it in class every day as a natural part of the reading experience. They're expected to have read it the night before, come in with their notations, then we re-read it in class and I show them...and we discuss and notate our way through it.

He showed students the assessment data he had collected so they would become more conscious of their reading fluency and the need to rely on technology to support their learning:

I use the audio [tapes]. I show it to them at the beginning of the year, I measure their reading rates, and...I say, ok, at your reading rate it's going to take you this long to read this novel, and then I show them how to use the variable speed and play it aloud in class. It takes them a while to get used to listening to something that's going faster, and I say, look, if you can do this at one-and-a-half-time speed it's going to [take you 6 hours]. At your reading speed it's going to take you 12 hours. What would you rather do?

For Wright, a major goal of English instruction for students with LD was to ensure their understanding of the text so that students could access the content. He explained,

Emphasis on understanding, not just fact recall or remembering plot, but coming to an understanding that's engaged with the text and struggling with the text and understanding that the text is not a fixed object with certain things that you need to know out of it but it's a way of thinking. So that's what I'm trying to get to, and it's to help them put words to some of those kinds of concepts.

The strategies Wright incorporated into his instruction served the dual purpose of supporting students' development of comprehension skills and their access to the content.

Wright employed less formal techniques to check on students' understanding of the text: "So checking in with them to kind of...making sure that they're understanding...periodically stopping and asking questions...just making sure that they're understanding." This informal assessment allowed Wright to fix comprehension problems on the spot. For instance, he commented,

For...comprehension we read it, we stop, we discuss it. I ask open-ended questions like, what does this mean? How does this connect?...I pick those places and say stop, let's not go forward until we are sure that we're understanding what's going on and what's difficult about this.

Furthermore, Wright's extensive experience enabled him to anticipate where students would likely encounter difficulty with comprehension and to create a flexible plan for instruction. Wright shared, "I've been doing it so long I almost know exactly which thing they're not going to know about or understand." This deep understanding of the English language arts curriculum enabled him to be responsive to students' misconceptions and to adapt his instruction as students engaged in lessons.

Wright addressed comprehension primarily using one strategy he identified as helpful to students: *Questioning the Author*. Questioning the Author is a strategy by Beck, Hamilton and McKeown (1997; 2006). Wright described Questioning the Author as a multi-step strategy. First, the teacher selects the text or passage and identifies points in the passage where they think students need to stop, think, and gain a deeper understanding of the text. Next, the teacher creates questions or queries that encourage higher-order thinking about the text at those stopping points. Finally, the teacher shows the passage to the students and models how they should read the

passage and think through the questions or queries. According to Wright, the steps of this strategy supported his students in deepening their understanding, enhanced their ability to create connections, and prevented the confusion typically associated with comprehending sophisticated text. Additionally, Wright worked hard to make connections for the students. According to Wright, he thought about the essential points in the story and emphasized them for students:

I need to remind myself of where the stopping points are...I need to remember to stop at this point and talk about this point...[or] emphasize this particular aspect...I want to bring these key things together for them in a way that they often can't themselves...so that they can think about it more richly than they might otherwise because they don't often have those literary chops.

Questioning the Author also provided Wright with a routine for incorporating many comprehension strategies. For instance, he showed students how to use sticky notes to mark essential passages in the text:

Right, and to make sure that they're recording their comprehension...this passage is difficult but it's central and it's thematic; how do we mark that done? Put a sticky note in there, then when you want to come back to that, go back to it and access it, look at it again in the context of this other passage that's 100 pages later. Literature is always...you have to keep this thing that happened in Chapter One and remember it's this thing that happened in Chapter Nine, and if it's 6 weeks later, you know, it's hard to remember.

Wright also incorporated re-reading as a way to support comprehension, which was also a technique he used for building fluency:

I've always known...that the best reading comprehension strategy is to re-read... With an unimpaired reader you do that automatically because it's quick and easy. "Oh, I didn't understand that paragraph; let me jump back to the beginning of it." So I want to make sure that they're getting it twice at least, and often three times because sometimes I'll read it two or three times as we're going over it. So they'll read it to themselves, I'll read it with the audio in class, and then I'll read it aloud as I'm going over that particular thing.

In the process of re-reading text, Wright had students notate and highlight text:

I want to make sure that they have a reference, that their hands are on the text and...that [they] can mark it and identify that as being more significant than other things, because oftentimes if you ask them to notate independently, they either do none or highlight the whole page instead of being able to focus in on those key things.

Wright's comprehension instruction involved both teaching strategies—Questioning the Author and re-reading—to support students' development of literacy skills and to enable their access to the content. Wright created routines for how students engaged with the text and for supporting their understanding of the text through ongoing informal assessment of their comprehension and discussion.

Writing. Wright identified writing as one of the tasks that is essential to students' success in a postsecondary setting:

You need to be able to produce a paper that is based on something you have read, not out of your head, and is formal and analytical and polished and structured according to...academic standards. You need to be able to do that...in a week.

Wright dedicated the most time to developing students' writing skills, though he did explore strategies to increase students' access to literacy content through writing.

Knowing the demands that students with disabilities would face in postsecondary settings, Wright focused on writing fluency. He remarked,

I started looking at their writing fluency as well as other kinds of things. But the speed of production was really an issue for me because I know what kind of production levels they were going to be asked of when they left here.

As such, Wright began the year assessing students' writing fluency. He explained,

I say, ok, here's a prompt; ready, set, go. And the first time I ask them all to do it by hand, and I find out how many words they can produce, how good it is, and you know, sort of measure it again on various different...at the surface feature level but also at the expression level and comprehension level and so forth. Then I repeat that again about 2 or 3 weeks later with another piece of reading, another prompt, and they can use their computers. After that 20 minutes of writing I say, ok, you can take this home and finish it with unlimited time. [Some students are not] going to get

to that 500 words in 20 minutes but it's going to take them an hour. Some of them...[have] no more to say. After 20 minutes of writing they've only got 100 words, but neither time nor the computer is going to help them because they've got no more to say.

This assessment provided Wright with useful information about students' writing fluency: which students needed extended time for writing, which students would always have limited production, and which students would benefit from the use of computers for in-class timed writing assignments.

Wright approached writing in the same deliberate way he approached reading, thinking about what students could do and then explicitly teaching strategies to improve their text. He stated,

It's just good teaching, you know...everything has to be structured...I tell them at the beginning of the novel, this is going to be the essay question; this is what we're reading for, these are the things you need to pay attention to and take notes on. When I give them a writing assignment, this is how you write an introduction. ...Start with a big, broad general statement, narrow it down to a specific statement, then have an arguable open thesis statement. And I show them how to do that...This is how you write a paragraph that has a topic sentence...and this is how you use specific quotations to illustrate those...Everything is step by step by step by step. And you know, if you can't do this on your own, if you can't generate these structures or these things on your own here's a way to do it, and it's all laid out for them.

Teaching explicit strategies was the mainstay of Wright's writing instruction, and he had well-established routines for incorporating explicit writing strategies into his instruction.

In the planning interview Wright explained,

I ask them to go home and write a thesis statement and introduction and then they come back in and they hand those in and I go over outlining...I talk about the structure of it and how to accomplish each piece on a day to day basis then ask them to go home and draft more or less on their own.

When students demonstrated difficulties, Wright helped them learn strategies by modeling how an expert would approach the task. He stated,

We talked about writing an introduction with a general statement, a specific statement, and a thesis statement. We talked about the fact that the thesis statement needs to be arguable and it needs to answer the question why does he change his view, not does his view change; that's not the thesis statement...And then I ask them to sort of outline their arguments with topic sentences.

Wright also supported students when they were stuck. He explained that he would say to them, "On your introduction I want you to maybe cut this or shape it a little more like this."

Furthermore, he had designed materials, such as graphic organizers (Appendix E) and rubrics (Appendix F) to help students plan for and write their essays. These materials were designed not only to support student writing in the English class; the rubric reflected the expectations for writing for the SAT.

While Wright used explicit teaching, he also used scaffolding to help students develop the independence they would need in a postsecondary setting. At the beginning of the year he provided more explicit teaching, but as the year progressed he required greater independence from students: "I tell them that at this point in the year, this is to see how much you can do with....independence...I'm trying to kick as many supports out from them as I can...I'm saying alright, now, write an essay for me." Wright's writing instruction involved teaching strategies primarily to support students' development of literacy skills along with their independence in using them. He remarked,

Produce a paper that is based on something you have read, not out of your head, and is formal and analytical and polished and structured according to the sort of academic standards. You need to be able to do that...in a week.

Wright believed that after he had provided the tools, it was the students' time to use them. He wanted students to develop the independence they would need in a postsecondary educational setting.

Disciplinary Literacy. Throughout Wright's discussion of comprehension and writing, he demonstrated the value he placed on developing students' disciplinary literacy skills and enabling them to access the content of English literature. For example, he described his choice of texts, explaining how he would like to expose students to the major genres of literature,

So we do...the novels have either been *Huck Finn* or *The Alchemist*, sometimes both, *Animal Farm*, either *A Farewell to Arms* or...*Johnny Got His Gun*, *The Great Gatsby*...I usually do a play, sometimes...This year it was *Master Harold and the Boys*, other times it's been *Our Town*...So I try to get all the major genres, talk to them about the difference among genres and how they are differently constructed and differently presented and differently told and what's the difference between a lyric poem and a play? What's the difference between a play and a novel? How are those generically different, what's the role of the narrator, or not having a narrator.

Wright's instruction was designed so that students could access the content, regardless of their ability level, and was coordinated within and across the content areas and grades, using their learning in other classes to scaffold their learning in his class. He recognized that accessing subject-matter knowledge in a literature class was difficult and that he had to carefully consider the challenges his students faced and how to help them through those challenges.

To ensure that students with varying skill levels could engage in analyzing the literature, Wright used *Essential Questions*, a strategy from *Understanding by Design* by Wiggins and McTighe (2005). According to Wright, *Understanding by Design* involves,

You ask these...these important questions, knowing that everybody's going to come at them from different levels...but choosing them in ways that everybody gets access to the same set of ideas, that they're going to get different experiences of those ideas but they all deserve to have those central questions...and they're up there on the board [for all to see and use].

Wright's apparent knowledge of literature seemed to help him identify the big ideas of instruction and develop guiding questions for the students. First, he identified the overarching guiding questions used in English classes across the grades:

The big questions are: What is literature and what's its purpose in human culture? Why do we even have this stuff when we're telling stories to each other that never happened? How does that work, how does that operate? And that's for the whole English department.

Then, he articulated the specific guiding questions for the 11th-grade English classes and the literature that would accompany those questions. He said,

For this year, I'm asking about how does change occur? What sort of influence does an individual have on societal changes? How do societies change themselves, how do individuals change themselves and how do these things interact between social, cultural, and political changes, and where is the individual in all of that? So, we do *Animal Farm* with this revolution that fails, and we have *The Great Gatsby*, where he tries to change himself from one kind of person into another; how that fails. And, the *Alchemist* is about undergoing a spiritual transformation and how you lead your life and what it means to lead your life, and the *Man Who Planted Trees* is about this guy who devotes his life to planting trees in order to change this entire region. So, it's all about these different kinds of changes and transformations in the individual, society and culture around that.

Wright seemed to realize that approaching instruction this way enabled students to engage at their own level of understanding.

Because Wright believed making connections was important, he coordinated his choice of literature with instruction occurring in other classes. He stated,

I kind of paralleled the history curriculum so that we...don't do it exactly in lock step. Once they've done World War I then I do my World War I novel; I also teach them poetry; we do the war poets and talk about the transition from formal poetry...into free verse and how that happens in the beginning of the 20th century around these social/cultural transformations.

According to Wright, making these connections for his students allowed them to develop a deeper understanding of both literature and history. Wright demonstrated how instruction must integrate the development of broader literacy skills and provide access

to the English curriculum. His choice of strategies illustrated the connection he saw between developing skills and providing access to the content. Wright demonstrated this by embedding strategies within his instruction that are specific to the domain of comprehension, writing, and fluency and are essential for students to master in order to be successful in postsecondary English courses.

Summary. Wright's framework for instruction consisted of learning literacy skills, or tasks and aptitudes that would assist them in their literature classes. The literacy tasks consisted primarily of literacy skills—such as fluency, comprehension, and writing—that are essential to students' postsecondary success regardless of the content being learned. The literacy aptitudes consisted primarily of domain-specific literacy skills that are unique to the content of English classes. From Wright's perspective, there was an important relationship between the types of difficulties students with LD experience and their ability to tackle literacy tasks and to develop aptitudes common to a high school English class. Wright believed that knowledge of the students' needs helped him design instruction that would either enable students to develop skills they needed to succeed in a postsecondary setting or enable them to compensate for their deficits. For Wright, instruction needed to balance developing the literacy skills students needed and making demanding content more accessible.

Geoffrey

Geoffrey, with a total of 34 years of experience, was one of the most veteran teachers at the school. When I conducted this study, Geoffrey was in his 24th year of teaching 9th-grade social studies at the school. In addition to social studies, Geoffrey had also taught mathematics for 8 years, English for 5 years, and language arts for 1 year. Geoffrey was known for his skill in helping students learn to write. Specifically,

his instructional strengths included sentence building, note taking, and paragraph writing. As the chair of the social studies department, he encouraged the social studies teachers to enact the decisions made in both the skills and writing committees. Members of the skills committee commented that almost all of the school's research was applied first in the social studies department. This was likely due to Geoffrey's positive leadership in this arena.

Geoffrey's Preparation and Training

Geoffrey obtained a bachelor's degree in history from Haverford College in 1978, a master's degree in education from the University of Pennsylvania in 1985, and a second master's degree in world history from Villanova University in 2000. In addition to the numerous credit hours he had completed as part of his training in history, Geoffrey had also successfully completed at least two education courses in teaching social studies but no official coursework in teaching reading and writing. Furthermore, Geoffrey reported attending 2 hours of professional development in teaching reading, 39 hours of professional development in teaching writing, and 69 hours of professional development in teaching social studies over the past school year. Although Geoffrey had considerable content expertise and training to be a teacher, he had never completed a course dedicated to teaching students with disabilities; however, he reported having attended at least 37 hours of professional development in teaching students with disabilities. Geoffrey was dedicated to continued professional growth and to becoming more knowledgeable about students with LD.

Geoffrey's Classroom

Geoffrey's classroom was large with a square perimeter and an entrance on the right wall. To the left of the entrance was an almost empty wall with a few spare desks

where students could work independently. Across from the doorway was a wall of windows covered in closed blinds, creating a shady and calm atmosphere. The desks were arranged in a rectangle in the middle of the room, from which seated students could see the screen at the front of the classroom.

Geoffrey's class was scattered with artifacts that disclosed his method for teaching literacy in his history classes. To the right of the entrance was a large whiteboard, above which a large screen rolled up and down. He projected on the screen the packet the students were currently working on, which was covered in notations and underlined text. Across the top of the board were packets containing readings, notes, and writing assignments for the units the students had completed over the year. Closest to the door, written on the whiteboard, was the daily agenda and homework, which included the reading and underlining activity I observed.

The classroom felt spacious and well organized, and materials related to literacy were everywhere. Beside the projector were folders in which students kept past assignments organized. Geoffrey's desk rested along the wall to the far left of the entrance. Organized neatly on top of the desk were stacks of student work, packets, and other various materials. Lining the same wall was a window and short bookcases, which held textbooks and reference materials. Across the top of the bookshelves were neatly stacked piles of past assignment packets, easily accessible to students who may have been absent. Geoffrey's students appeared to be engaged, transitioned between activities smoothly, and demonstrated the ability to independently locate materials and follow directions written on the board. These behaviors served as evidence that Geoffrey had well-established routines and that literacy instruction was well integrated within the students' instructional experiences.

Geoffrey's Lived Experience

Geoffrey's framework for teaching included the following themes: (a) developing students' literacy skills with an eye towards the future, (b) understanding students' learning disabilities, and (c) designing instruction to further students' learning.

Developing literacy skills with an eye toward the future

Geoffrey's framework for teaching included what he referred to as "intellectual skills" students need to develop to be successful in postsecondary settings that provide a liberal arts education:

School in America is still designed on the Golden Renaissance model of giving them a liberal arts education...Everyone's got to do English, everyone's got to do math, everyone's got to do history because there's the whole getting-into-college routine.

When talking about what students needed, Geoffrey focused on the necessity of literacy skill development, prioritizing skills over content. Geoffrey explained,

We have to cut it down to what is most essential and getting them to use the intellectual skills...At the rate that information is doubling, every 18 months, the content really isn't as important as the intellectual skills of how do I organize information? How do I write a competent paragraph?

For Geoffrey, such literacy skill instruction involved the integration of reading and writing. He explained,

There's generally a step of underlining and notes which you do all in one night...and then do two-column notes...and then the next night normally is an outline...and a paragraph based on that outline, which is generally the way I've been teaching them to do it...Working on the individual skills of underlining, note taking, outlining, and paragraph [writing] and...getting it down to a 2-day routine.

Geoffrey's expectations for students were based on what he had learned from former students who were successful in postsecondary education settings. He recalled his conversations with them as follows:

One thing that we've heard some of our more successful students talk about... well you know what I really appreciate is yeah, the amount of reading you have to

do in college is a shock, and I know I didn't read as much as my sister did...I can't read nearly as much as my siblings there in their mainstream class, but what I learned here that they didn't learn in their classes is I learned how to write, or, I learned how to organize my time. I learned why I'm doing something and how to do it. . . For me it wasn't a big shock in college because all the stuff that my teachers and my friends had been telling me, whether I listened and did it or not, when push came to shove in college I know how to deal with this problem; I can hear teachers' voices in the back of my head telling me.

From Geoffrey's perspective, his priority to teach literacy skills over content is driven by the types of difficulties students with LD experience. He explained, "Working with kids with learning differences, you have to always put the kid first and the content second...I think that is a real challenge...for content teachers, that's not what they like to do because the content is a major part of our lives."

Geoffrey's framework for instruction consisted of learning literacy skills that would assist students in meeting the liberal arts expectations in college:

For most of our students with learning disabilities, they're not generalists...They are specialists...We [society] haven't figured out how to do that in a way that allows them also to use their specialties...Don't ask me why because that's a whole new section.

For Geoffrey, students' success did not depend only on learning literacy skills; his successful students had "learned how to learn."

Understanding students' learning disabilities

Geoffrey viewed history as a subject that posed many literacy demands on students with LD:

Reading and writing demands are pretty heavy for these students because the vast majority of the information is coming from texts, or if it's coming from a video they have to record the dialogue of the video and take classic two-column notes on that [inaudible] connected to a question. So there's a lot of writing...trying to get this information into their heads through the reading or through the visual and the listening.

Geoffrey acknowledged the difficulties students with LD had when interacting with text and writing, and the impact these difficulties had on their ability to understand

historical content. According to Geoffrey, students with LD “are coming in reading at a lower level with more multiple disabilities.” Furthermore, he noted their difficulty with different aspects of note taking. He clearly understood what they would need to do that they currently could not:

[1] How to underline, [2] how to identify what’s important, [3] how to identify the nouns, the verbs, [3] how do you take that underlining and put it into two-column notes, [4] how do you take maybe two lines of notes and then say, ok, what’s this about? [5] [how to] put it in the lefthand column one or two words.

Finally, he noted that students with LD had difficulty demonstrating their knowledge because “what they’re missing is quite literally writing...either extended paragraphs or more than one paragraph.” From Geoffrey’s perspective, his students did not have the skills to write expanded paragraphs, which included not only a topic sentence and supporting details but also details to elaborate upon supporting sentences. In other words, they struggled to write essays.

When reflecting on one of his classes, Geoffrey provided extremely detailed explanations regarding how students’ strengths and weakness impacted their ability to engage in history instruction:

Many of them are quiet so that their word recall is weak and their word recall may be weak because they have dyslexia so they don’t read as much, they don’t have as much, literally, words floating around in their heads. In other cases they may have . . . slow processing speed so it just takes them longer to answer a question or to literally pull out the words that they want. Most of them have strong executive functioning skills, so in other words they hand their work in on time, they can pay attention. There’s only one student who – and it will be very clear who that is – who has huge organizational problems and attention problems...But the others in general get their work done. Because of the dyslexia there’s a lot of spelling issues, and the outline and...their intros and conclusions are...very, very weak.

Geoffrey also understood how the content of history was extremely challenging for students with LD and placed additional demands on them as learners:

I think it's a very hard subject to teach because you're dealing with a different time period, generally, and you're generally dealing with a different geographic location, and that means different culture, so it's not something they have any personal experience about, and that makes it so, so difficult...[for] kids who have no background knowledge...For most of these kids these names are totally, totally new; never heard them before in their lives. They're familiar with Columbus and that's it.

Geoffrey knew that just overcoming students' literacy challenges would not be enough. He would also have to find ways to help them acquire, retain, and demonstrate their knowledge of history if they were to be successful in postsecondary settings.

Designing instruction to further students' learning

Geoffrey believed that teachers had to understand their students' learning needs if they were going to design instruction that would allow their students to be successful in a postsecondary setting. For him, ongoing assessment was essential to instruction. For instance, Geoffrey used the school assessment to help him develop class profiles and then designed literacy skill instruction tailored to the class profile:

You take the learning profile of the student that the school puts together, and the plusses are strengths and the challenges are minuses, and this grid has all the same terms; you just do plusses and minuses and you begin to see oh, a lot of the class has attention problems, but a lot of the class... Like the class you see doesn't have attention problems but they have the decoding issues, so I'm going to have to spend more time helping them with that...In some years it may mean that more work is actually done in class.

Geoffrey's instruction was also informed by his extensive knowledge of history and his ability to identify what essential information students needed to learn from the content. "I've probably read a book for every page that they've read," he said.

Geoffrey's immense historical knowledge enabled him to hone in on developing those literacy skills that would help students access information in text, retain information, and demonstrate their knowledge. The following section explores how Geoffrey designed instruction in reading, writing, and disciplinary literacy to further students' learning.

Reading. Geoffrey identified reading as a literacy skill needed for studying history because the “vast majority of the information is coming from texts.” Geoffrey used his knowledge of the content to identify what the most important information was and to rewrite the text to minimize the amount of reading his students had to do. First, Geoffrey cut back the amount of text he expected students to read. Next, he engaged his students in explicit strategy instruction. He shared with me how he would instruct the students to “take the text, get it down to the basics, reorganize it in basic form, and put it back into text form.” To further support students, Geoffrey also included visual images:

Because text is so hard, a lot of the work is spent [asking] how do you break down the text...But if we want to look at the big picture and abstract thinking, I try and find things... and the textbook does provide the visual imagery...and that's where you can ask the bigger questions.

Geoffrey had even decided to rewrite the text to simplify what students had to read:

So instead of five pages it's eight paragraphs, meaning it's maybe 20% of what I would give them, and that probably will give more time to the primary source and then my guess is, then, as a search activity have them bring in the visual aids because then that can be teaching them search techniques that don't require a whole lot of reading....And my guess is the next step, then they have to put that in PowerPoint, link it with... give everyone a passage and they have to find three visual examples that might be appropriate for that.

Geoffrey's third strategy was to teach students to use text-to-speech software. He knew that his students' fluency was “about half of what most non-LD college students have, meaning it's about 125-130 words a minute silently, and it's about 250 words a minute for most students that are going to go to college.” Therefore, they needed assistive technology to manage the workload, and he taught them to use the software independently:

I point out [that]...listening to the computer talk out loud is faster than for most of them to read it silently...so I'm saying...it's going to take you twice as long to do this, to read compared to your non-LD classmates. So unless you want to spend every waking hour with your butt in the chair instead of going out and running and playing Frisbee and all those good things that you should be doing in college, you better take a reduced load.

He learned that if he did not dedicate class time to this, students would not use the software and would not be ready to use it in college without support. He acknowledged,

I've learned is you need to literally take class time and literally supervise and watch them and demonstrate how to do it, but also have them practice in class because they need to do it for months before they'll start doing it literally on their own. But if I spend class time on it they will start using the technology.

Geoffrey knew that his students also needed to learn strategies. According to him they needed an approach for identifying the important information in the text, and this included teaching students the following:

[1] How to underline, [2] how to identify what's important, [3] how to identify the nouns, the verbs, [3] how do you take that underlining and put it into two-column notes, [4] how do you take maybe two lines of notes and then say ok, what's this about? [5] [how to] put it in the lefthand column one or two words.

He focused on these skills and strategies because he realized students with LD simply "don't do that very well," and he realized students would need to do this independently.

Geoffrey helped me understand how he created independence through explicit instruction and practice when he stated,

I teach the underlining on the screen and then they'll copy it down, and then the next morning when they come in we'll sort of... they'll do a little underlining activity as a review, and by mid-year they're showing each other how they're doing the underlining.

In fact, the instruction Geoffrey described was laced with specific strategies for helping students acquire the basic skills they needed. He described how he included vocabulary in his reading instruction by identifying the words students needed to know in order to comprehend the text and by helping students see how they could use

knowledge of affixes and roots to understand the origins of words. He spoke about how he explained the origins of the word *monarchy*: “*Mon-* is one. *-archy* is also rule, so it’s one ruler... So in language arts they are teaching roots and prefixes and suffixes.” He explained that the value of incorporating morphological awareness into vocabulary instruction was that it reminded students “Oh, yeah, that’s the one where the king rules...so that they don’t have to stop and think, or worse, not stop and just blow through it and totally forget which form of government they’re dealing with.”

In addition to using multiple strategies, Geoffrey also described how he relied on teaching routines like teamwork to engage students in learning explicit strategies. He described the following reading routine:

I’ve printed out the electronic text that they all have in their computers so they can actually open up the electronic text, and we actually practice that in class and listen to the text...And I think the best way to do that is we have people split up into teams, and you guys are going to show us your underlining of this particular paragraph. So take a few minutes, talk to one another about what you underlined, and I’ll have to remind them today to make sure the next underlining is done in pencil so they can do that. Then they actually show what they underlined and why and we use the [projector] for that...Then the next step would be, do a demonstration of that one little paragraph that I underlined, do a demonstration of notes and whatever paragraph we have them do underlining on... One team is going to do the underlining and show that and the other team, some other team, while they’re talking, when it’s their turn they’ll show what they did for notes and why.

He felt that engaging them in routines like this helped students demonstrate their knowledge through writing. He said, “Well, it’s to get them to understand that if their notes are good enough, most of them can rely on their notes.”

Writing. Although a great deal of Geoffrey’s instruction focused on reading, his goal was ultimately to focus on students’ writing skills. He said, “[I] cut back more and more of the actual reading content so they have more time to practice their writing.”

Geoffrey believed that developing writing skills was essential to attending college and that students who “developed their writing skills...[were] going to 4-year universities.”

Thus, Geoffrey used explicit strategies to support their writing and to connect writing to what they were reading. First, Geoffrey’s writing instruction involved teaching students to turn what they were reading into an outline. He discussed students brainstorming to create outlines:

You start creating that from a brainstorm. You do brainstorm based upon what they read, and it should only be short sections, and you go through that process each and every time you want them to read. At least do a brainstorm, and then from the brainstorm they create an outline that’s logical.

Teaching students to use their notes to write an outline was also a core component of his instruction. He discussed this extensively: “Getting [students] used to the idea that they’ve got to get the notes as quickly as they can, put the outline together.” This process involved “teaching them how to take the reading and turn it into notes, and they then turn it into this outline that they then turn into sentences.” Geoffrey saw the outline as a critical support that helped students transfer the ideas they had in their heads into written language.

From the outline, Geoffrey explained the detailed process he taught students for writing paragraphs independently from their outline. He stated,

The introductory sentence, you need to just put in some short lines first before you do an intro of who, what, when, where, why, and they put in one or two words and then they take those words to create the sentence.

They moved from the sentence to “pretty simple paragraphs” by writing “one or two sentences for an intro, five or six sentences for examples... I’m trying to do an extended paragraph where... the third sentence is your first detail concept and then you have two supporting details that are even more specific.” He encouraged them to use their notes, taken in a note taking template he had designed (Appendix G), and to plug them into

their paragraph, “turning them into examples.” For Geoffrey, these paragraphs were essentially “just summarizing what we’re reading.”

Geoffrey was concerned with helping students get ready for the demands they would face. He talked about how he helped students go back to their previous writing assignments and turn them into outlines they could use on exams. He elaborated,

There are ten questions that they’ve got, all paragraphs... It’s basically forcing them to go back into their old notes and their old homework assignments, pulling out those old assignments, looking at them, my comments, as well as looking at the general comments I made for everyone and improving on it, and then writing another draft, and then going through there while it’s fresh in their head into what I call a one- to two-word-per-line outline.

He also seemed to understand how to balance helping students become independent with being sensitive to the stress they experience when trying to perform. According to Geoffrey, he allowed students to have an outline in the exam because the stress these students experienced often impaired their working memory:

But because their working memory is weak and they will be feeling some stress of exams, they’re not going to remember as much as they would with homework assignments, so...I photocopy [the outline and give it] right back to them...and they go home and study that, and I attach it to their exam. So they’re not allowed to walk into the exam with any piece of paper, but that outline is there for each of the five extended paragraphs.

Geoffrey’s entire literacy routine showed students how the information they accessed while reading, underlining, and note taking could be translated into writing. His instruction, as he described it, made strong connections between reading and writing.

Disciplinary Literacy. Geoffrey clearly prioritized explicit skill instruction over content instruction, as was demonstrated when he said, “At the rate that information is doubling, every 18 months, the content really isn’t as important as the intellectual skills of how do I organize information, how do I write a competent paragraph?” However, it

was evident that disciplinary literacy was a fundamental theme throughout Geoffrey's literacy instruction.

Geoffrey organized his instruction around units, and these units included Essential Questions. He obtained this strategy from the Grant Wiggins and Jay McTighe (2005) book *Understanding by Design*. In my interview with Geoffrey, he described how he incorporated the Essential Questions:

The second month is... [the] Bronze Age Greece and looking at the *Iliad* and Troy/Greece because they're going to read the *Odyssey* in November...I use it as a context for looking at the concept of war and conflict: How do you try and deal with conflict? I then also add in modern-day [conflict] because our nation is at war in Iraq and Afghanistan – looking at those conflicts and making compare and contrasts: Why did these wars start? Are they similar or are they different? What are the consequences of war?

The Essential Questions played a significant role in how Geoffrey approached comprehension, note taking, and writing. When discussing how he checked students' comprehension of the text, Geoffrey explained, "The next step would be for me to check in to see do they really understand...I'll ask the Essential Question." When students did not understand the Essential Question, he would have them look back at their notes because, according to Geoffrey, "they do their notes with the essential question." Geoffrey went on to explain how the Essential Question was fundamental to students' note taking: "There's an Essential Question—What was Columbus' reaction when he reached the Bahamas—and that should guide them as they're taking notes." See Appendix G for an example of an Essential Question used to guide students note taking. Once students took notes on the text using the Essential Question, they turned their notes into an outline first, sentences second, and paragraphs last:

One thing that I've added to it is I give them an Essential Question...You start out your answer by taking the question and turning it into a statement. You then use who, what, when, where, why to add to that.

Geoffrey explained in detail how this applied to the unit they were currently studying:

So in this case the question would be, what tension developed between Portugal and Spain? And what I then tell them is, “Ok, you start by saying there was tension between Portugal and Spain, and then you have to say... Ok, during the Renaissance...Europe...went about exploring...Africa and the Americas” ...and then they give their four examples, and generally they’ve got more notes than they’ve got examples, but they have to figure out what to choose.

The Essential Questions helped Geoffrey address the difficulties students with LD had with the literacy demands of studying world history:

But what I have learned in doing the Essential Questions is, if you can sort of get one question per page it means the kid who has ADHD or the kid who is very severe dyslexic – in other words the student who takes a long time to do work and runs out of energy on the second page, at least they got the first page done; . . . and they can go right to a paragraph summary.

Therefore, the Essential Questions enabled students to engage with the content at their skill level and were an integral aspect of Geoffrey’s literacy routine.

For Geoffrey, making connections was important for his students. He designed his social studies instruction to be coordinated with the English classes’ instruction. He mentioned, in his description of the units,

The second month is... [the] Bronze Age Greece and looking at the *Iliad* and Troy/Greece, because they’re going to read the *Odyssey* [in English class] in November...In March and April we go to the Age of Exploration, the European diaspora, and in May it’s the Industrial Revolution. After that in February we go to the Renaissance. We flipped that around this year because they [the English department] did *Of Mice and Men* in March because there was a play.

Geoffrey explains that he designs his instruction to align with the English curriculum because “I realize how much the English teachers have to already do the historical/cultural/social context of the story, and if there’s a way that I can help them do that, so much the better.”

Geoffrey was always thinking about ways he could help students integrate content instruction with reading and writing:

In the future...I'd be more thoughtful about the question. One thing that we know with Essential Questions and the whole Grant Wiggins and Jay McTighe *Understanding by Design* is that you create the exam at the beginning of your project. And that's a little hard to do, but what I do...is...[select the] most essential readings...and then look at those questions each month...and use those to then make the exam. But having the end-of-year exam already prepared of the most Essential Questions... they know that's what's going to be on the exam, not the other stuff; it's far more powerful teaching because every single day you're setting them up.

He planned to incorporate the content even more by changing the sources of the text material he uses:

Probably next year what I'm seriously thinking of doing is basically getting rid of the textbook – sort of following the same themes but typing up a more capsulized summary of the information myself so that we can really spend more time on primary sources.

He explained, "If you can solve the decoding issue, they like [primary sources] more; it's more authentic." By using more discipline-specific sources of text, such as primary sources, the reading may be more challenging for students, but the content will be more meaningful and motivating to students.

Geoffrey's approach to content instruction was fundamental to his literacy routine; it was the glue that bound his reading and writing instruction together. Although Geoffrey explained that he was dedicated to skill instruction in literacy and was willing to cut back on the amount of content students learn, his integration of Essential Questions enabled him to prioritize the most important content and to incorporate content into every aspect of the students' literacy instruction experience, i.e., disciplinary literacy. Furthermore, by reducing the literacy demands posed by the text, Geoffrey could support students in using primary sources, which contained more authentic content and were more motivating to students.

Summary

Geoffrey's framework for teaching included what he referred to as intellectual skills that students need to develop in a high school world history course in order to be successful in postsecondary liberal arts settings. When discussing students' LD, Geoffrey focused on the necessity of literacy skill development, prioritizing skills over content. Geoffrey conceptualized his framework for teaching as an instructional routine that integrated reading and writing instruction into the content instruction, and his instructional repertoire for reading, writing, and disciplinary literacy reflected this framework. Geoffrey's instruction incorporated features of the professional development he had attended, such as trainings by Judith Hochman and texts by Wiggins and McTighe (2005), and reflected his strong desire to improve. Geoffrey was continually engaged in the process of redesigning his instruction to align more closely with the framework he described for teaching.

Teagan

At the time of the study, Teagan had been teaching for 17 years and was in his sixth year at the school. Teagan currently taught 6th-, 7th-, 8th-, and 10th- grade English, though the focus of this study was on his 10th-grade English classes. In addition to teaching English, Teagan was the school's music teacher. He advocated for the creation of a formal music program in the school, was designing a music program curriculum that focused on the development of executive functioning skills through musical improvisation, and was involved extensively in recording and producing music with students outside of class. When recommended as an expert, Teagan was described as being effective in teaching students to notate fictional texts. The students felt a strong connection with Teagan, as was apparent in the frequency with which students stopped by to say hi or to hang out in his classroom during our interviews. At

the graduation ceremony, Teagan was one of the most thanked and acknowledged teachers.

Teagan's Preparation and Training

Teagan obtained a bachelor's degree in English from Saint Joseph's University in 1995 and was certified to teach secondary English. In addition to the numerous credit hours in English he had completed as part of his English training, Teagan had also successfully completed numerous education courses in teaching English but no official coursework in teaching reading or writing. Teagan reported having attended professional development in reading, writing, and teaching English. In addition, he attended the Orton-Gillingham training, which entailed over 80 hours of professional development in teaching explicit decoding skills. Although Teagan had considerable content area expertise and training to be a teacher, he had never completed a course dedicated to teaching students with disabilities. Although he had little formal training, Teagan had undergone a significant amount of informal training and was devoted to learning about students with LD. He worked closely with other teachers to learn techniques for working with students with LD. Additionally, Teagan was enrolled in a music program in which he was designing a curriculum for using music improvisation to improve students' executive functioning. In my interview with him, he cited various studies regarding the connection between working memory and improvisation, and he discussed the neurological evidence for the validity of his approach to music. This was evidence of his extensive independent reading and informal training related to teaching students with LD.

Teagan's Classroom

Teagan's classroom was small and shaped like a trapezoid, with the entrance on the left. To the left of the entrance was a short wall with a whiteboard. A rolled-up screen for the projector hung above the whiteboard. Directly across from the doorway was a long wall covered with a bulletin board. A large cupboard for materials was in the corner. At the end of the classroom was the shortest wall, which had a large bright window that sun streamed through. Below the window were another two bookshelves holding stacks of papers, binders, etc. In the center of the room were the desks, positioned so that students faced each other yet could still see the screen and whiteboard at the front of the class.

Teagan's classroom was littered with artifacts revealing his methods for teaching literacy. For instance, available whiteboard space was covered with notes about the class's current novel, *The Catcher in the Rye*. Much of the shelf space was used to store novels and plays, including *One Flew Over the Cuckoo's Nest*, *Their Eyes Were Watching God*, and *Macbeth*, to name a few. At the far end of the wall was a projector and Teagan's desk, which was covered with neatly stacked papers, novels, and a laptop with a graphic organizer on the screen. The laptop was plugged into the projector but currently not turned on.

The classroom felt cramped but lively. At first glance, students seemed to be engaged only part of the time and off task at others. Upon further observation, however, I realized that students were not off task. Instead, students were spontaneously making connections between the text and stories of their own experiences. Students enthusiastically participated in discussion, and they were eager to share their ideas and thoughts. The class had an informal and energetic climate.

Teagan's Lived Experience

Teagan's framework for teaching included the following themes: (a) developing students' literacy skills with an eye towards the future, (b) understanding students' learning disabilities, and (c) designing instruction to further students' learning.

Developing literacy skills with an eye toward the future

Teagan's framework for teaching included helping students develop literacy skills with the goal of making learning meaningful to them and of preparing students to be successful in settings beyond college, including everyday life and employment. Teagan explained his instructional focus for 10th-grade classes: "The main focus is skills...And so the main skill that I teach is abstract reasoning, and so it's all mostly reading comprehension, so that's the focus of the year."

Teagan saw his role as being a part of a group of teachers who worked to help students develop the literacy skills they needed. When discussing his role in relation to the language arts (LA) department, he explained, "The LA department is getting them up to speed, so then it's my job to have them want to stay there... getting them to jump from year to year and continue the skills." Teagan saw how his class prepared students to be successful in Wright's 11th-grade English class and their 11th-grade social studies classes:

So I started really saying to them...I've been saying to them all year, "Next year when Wright asks you to write about *The Great Gatsby* you should be using this formula. And when Samantha asks you to write the research paper it's the same formula, you know?"

For Teagan, his role in the broader school environment was clear: Help students transfer their learning from prior years to his class, and prepare students to transfer their learning in his class to future classes and other content areas.

Teagan also identified how important it was to create meaningful experiences for students. He said,

For me it's all about making meaning and...turning school into a meaningful experience and making meaning out of whatever it is, whether it's a text or whether it's music, class discussions, homework assignments...that they have to do just to survive being a human being. It's really about making meaning out of those things.

For Teagan, meaningful connections in school were essential to the motivation of his students, particularly given their low literacy skills. He explained,

They've got to want to come to class, and they've got to want to talk about what's going on in their lives in order to connect with the text, especially these students who, you know, before they come to us they've never read a book, you know, and so many kids are coming to us at 1st- and 2nd-grade level reading level.

Teagan's beliefs about motivation and success were based on his prior experiences as an undirected youth:

So I can understand that as a kid I didn't really feel like anybody saw what was important to me as valuable, so therefore I grew up not knowing what I wanted to do and not really caring because I figured I'm just going to end up doing some loony job anyway...The best thing that I could do for them was to help them figure out what was important to them, you know, and if they could figure out what was important to them, then they could make a plan around making time for what's important to them, so then they have something with meaning in their life.

His personal experiences helped him identify with his students.

Teagan's framework for teaching incorporated his complex understanding of the relationship between students' literacy skills, the importance of creating meaningful learning experiences, and their postsecondary success. Instruction was not just skill development; maintaining the gains students made in other classes was also important, as was preparing students for future classes. Making learning meaningful was just as important. Teagan wanted his students to be motivated to maintain skills independently.

Understanding students' learning disabilities

Teagan saw a connection between students' learning differences, their motivation, and their ability to find learning meaningful:

I think a lot of our students are really lost and they're alienated by school. Many of them, especially those who are adopted, their parents don't really understand them because they're not LD themselves, or they come from an antiquated perspective of what it means to be LD...so they really kind of feel disenfranchised. So many students come to us just...they just do not believe in anything, and they really see school as nothing but a series of hoops to jump through.

Teagan also understood, however, that his students' academic difficulties were substantial and that they impacted their ability to engage with texts and find meaning.

Teagan discussed students' LD primarily in terms of how it impacted his instruction. He explained,

What works one day with one group is not necessarily going to work ever again. So you have to be willing to keep ahead of them and be willing to learn new things and learn new approaches; otherwise you're just going to stagnate.

Teagan's belief that you have to do "what works," and continually make instructional changes based on students' ability, was also reflected in his plans for future instruction.

For instance, he explained how he needed to change one of his texts next year to address the learning challenges he encountered this year. He explained,

Next year I think I'm going to get rid of One Flew Over the Cuckoo's Nest... I tried books that are usually above their level so that they're completely immersed in it, and that just forced the abstract down their throats. And in One Flew Over the Cuckoo's Nest nothing in the book means what it says because it's told from the perspective of a paranoid schizophrenic...In previous years they've been able to do it; this year...it was way too hard for the students this year... they just were lost in it this year. I mean it was way too long – it was like 350 pages...I don't know, it was too abstract for them... and my understanding is next year's students are less abstract than this year.

Teagan also described how students' LD impacted not only his selection of the content for instruction but also the instructional delivery method he employed:

Notice we're still practicing the strategy even though this is the fifth book we've done. They need to re-practice it each time and that's [inaudible] with LD students... You changed the text, you changed the context... You change the context just slightly with the book and you have to reteach.

Teagan knew that the issues his students faced would require him to continually find ways to reteach strategies with new contexts.

Teagan understood the connection between students' LD, the effect of their LD, and their academic abilities. He understood that students with LD have varying strengths and weakness, and he demonstrated willingness to adjust his instruction based on students' needs.

Designing instruction to further students' learning

Teagan designed instruction to reflect his complex understanding of the relationship between students' literacy skills and the importance of creating meaningful learning experiences. Teagan's instruction reflected his sensitivity to students' learning differences and to students' need for repetition to increase the transfer of skills to future classes. As such, Teagan integrated predictable routines into his instruction and used consistent language. He explained,

For every task that they have to do I have a specific system in place and a series of steps that they have to follow, and it's always the same, so that... when we're talking about writing I'm always using the same language, regardless of what the topic is.

The following section will explore how Teagan designed instruction in reading, writing, and disciplinary literacy to further students' learning with the aim of maintaining students' literacy skills, preparing students for future classes, motivating students, and helping students find meaning in their learning.

Reading. Teagan identified reading comprehension as an important literacy skill for 10th-grade English and thus focused on reading extended texts. He reflected,

The main skill that I teach is abstract reasoning, and so it's all mostly reading comprehension, so that's the focus of the year. [I choose] mostly novels because of reading comprehension and because I want them doing sizable chunks.

Teagan knew that extended texts were challenging for students because of their limited reading abilities and/or because of their limited time management skills, so Teagan designed an instructional system to address both issues.

Teagan described how he assessed what he saw as the first barrier to students reading the text: fluency. He described assessing students' reading rate, "We diagnose their silent reading speed at the beginning of the year, and then usually I do it again in the second half of the year." Next, he explicitly taught all of the students how to use the audio-recorded versions of the text. He selected text that was challenging enough that all students would need to depend on the audio recording of the text, so that regardless of their reading rate, they needed to use the technology to manage the amount of reading. He explained,

So one of the reasons I do *Their Eyes Were Watching God* is because nobody can read it without the audio, and so everybody has to use the audio for that, and I do that early in the year so that everybody... and I tell them I don't care if you're not dyslexic and if you're reading at 250 words a minute, you have to use the audio and use the audio in class, and I put it up on the screen and I show them how I got it into QuickTime and how I sped it up and how I slow it down... So usually by the end of that book people have bought in, or the kids who need it have bought in.

After explicitly teaching all of the students how to use audio recordings of the text, he helped students "determine whether or not they need audio." He did this by analyzing, with the students, their reading rate:

Let's look at how many pages the book is, how long I want you to read it in, here's the audio, here's your reading speed... If you're reading at this rate then you should or should not be using the audio.

He then insisted they load the audio recording into their computer, but he allowed students to choose whether or not to use it:

Yeah, and then for everything else I just make sure they get the audio. And for everything up to *The Catcher in the Rye* I make every student load the audio into their computer whether they want it or not, so if they decide they want it they have it. And for *The Catcher in the Rye* they have to ask me for it. And so this time around maybe ten kids asked me for the audio, and some of them asked me like a couple of days in.

Teagan then described the second barrier his students faced: time management.

He helped students manage the quantity of reading by teaching them to create and follow reading schedules. He explained,

We look at how many pages there are, what the size of the font is, things like that. And in the beginning... the first half of the year I give them a reading schedule and it's just a sheet that has the next month, and basically that's all they have to do is read and follow the reading schedule. So I'll tell them, it's ten pages a night, you're reading at this rate; you need to figure out how long it's going to take you. And we usually spend a class period just kind of batting that around and talking about that so that the kids understand that realistically, in order to follow this schedule, it's going to take you an hour a night, so you're going to have to either save it for the weekend, do a bunch, or use homework lab.

Teagan helped students come up with a plan for how, at their reading rates, they would tackle the text. He explained that he slowly reduced the amount of oversight he provided in planning: "Then as the year progresses I give them fewer reading schedules."

Teagan also had an instruction system in place to help students comprehend text. He taught the students to apply the *RAP Q* strategy, a modification of a paraphrasing strategy presented by Schumaker, Denton, and Deshler (n.d.), while reading independently. Teagan described the *RAP Q* strategy as follows:

R stands for *read and underline*, *A* stands for two different things at two different parts of the year. In the beginning of the year it stands for *ask yourself what happened*; at the end of the year it stands for *analyze what you underlined*, so as they progress we change that to... by labeling in the margin what you underline with a symbolic *c* for *conflict*, *m* for *motivation*. *P* stands for *put in a summary*, and *Q* stands for *make up and answer a question*. So they have to do that while they're reading.

Teagan translated this strategy into specific steps for students to follow when reading the text. He used this same process with every novel students read. The first step of the process was for students “to underline like two or three things per chapter.” Teagan believed this step was important “so that there’s the tactile kinesthetic while they’re reading.” The second step of the process was for students “to notate what they underlined.” Teagan explained that the reason for notating is “so that they’re thinking about why they’re underlining what they’re reading.” Teagan taught this step explicitly:

I gave them symbols like *S* stands for *symbol* and *M* stands for *motivation*, *C* stands for *conflict*, or if it’s something important, you know, they have to put a summation point next to it. You’re not sure what it is but you know it’s important; you’re not sure why but you think it must be important; we do a lot of that.

He provided students with explicit feedback on their notations. He said, “I’ll check their notations, and I’ll probably review what I don’t like about their notations, and I’m very specific.” The third step was for students “to do a summary that follows the *dash and slash* method.” The purpose of the summary was to emphasize that “if they can’t summarize it, then they can’t tell me what happened.” Teagan explicitly taught summarization using the dash and slash method to enable students to write shorter, more concise summaries that they would be able to reread later. He explained,

We’ve been doing a lot of work with the Judith Hochman program, and so her note taking—she calls it the dash and slash method—so...I’ve been using the dash and slash method for summarizing, and I taught them abbreviations for words and things like that, so that when they summarize they’re only using dashes and slashes; they’re not writing out these long summaries.

The fourth step was for students “to give the chapter a title.” The purpose of the chapter title was “so that they know what the chapter’s about; if they have to go back and find it later on, they can find the chapter.” During the fifth step of the strategy, Teagan taught the students to create a question based on the text. The reason for the question was to “give them something to think about and talk about in class the next day.” Furthermore,

Teagan used questions as writing prompts for students by having them “pick one question that was made up by somebody in the class, any class, and they had to write a paragraph about it.” The sixth and final step was for students to “dog-ear the page where they did their chapter summary.” Teagan explained, “The dog ear is so that they have a map of where all the summaries are.” By dog-earring the page upon which their chapter summaries were, students were able to locate them for future use.

Ultimately, Teagan’s goal was “helping the students make meaning out of the text.” In order to do so, students “have to have a pretty clear answer about what the text means. And it can’t be, it’s whatever you think it means.” His instruction was designed to be “as systematic as possible towards leading them to that meaning without me telling them what it means.” Teagan’s strategies provided students the skills to better manage reading lengthy texts while helping them become more critical readers. Furthermore, he used scaffolding to slowly reduce the support he provided and to increase students’ independent use of strategies. Independent skill use, from Teagan’s view, was essential to helping students transfer skills to future classes.

Writing. Writing instruction also provided Teagan opportunities to help students make sense of text. Teagan described how he used writing instruction to improve students’ reading comprehension in the novel *One Flew Over the Cuckoo’s Nest*:

Each week... they had to do notating the way I showed them, and then they had to be making up a question, and then they had to pick one question that was made up by somebody in the class... and they had to write a paragraph about it following the formula for analytical writing... Everything came from reading.

Reading was the origin of the writing process for Teagan, and he described how he carefully scaffolded students through the process:

Each week I gave them less time in class to work on it, so that by the time they did the sixth one I didn’t give them any class time; I told them that Monday you

have to turn it in, and then they had to pick one at the end of the novel and revise it.

Teagan's writing instruction focused on teaching students a systematic process for analytic writing. Teagan referred to the graphic organizer he used as a "formula that's step by step... [The students] just fill that in and then they transfer that and then we work on revision." The formula Teagan referred to was a graphic organizer for writing essays; the organizer contained separate spaces for the development of the introduction, body paragraphs, and conclusion. Teagan explained, "You know, so like it's very basic...and there's directions for each thing." Students used the graphic organizers to help them write analytical essays about the novels they read. Teagan used the graphic organizer to convey the following to students:

When it comes time to write an essay the only part that they're actually writing is the analysis, that the rest is not their words. The whole introduction...Yeah, all you're doing is piecing it...you're not actually composing it; all you're doing is building it and that there's really a difference between the two, and then the only thing that you're actually writing is the one sentence analysis.

Having students use the graphic organizer to help them write the essay taught them that essay writing is a process by which they piece together examples and quotations to support their analysis. Teagan used these steps to make the task of writing more manageable for the students.

Teagan felt the graphic organizer allowed him to differentiate the writing process based on students' needs:

The extent to which they follow my formula differs from student to student. So some students, I will say, "You have to fill this out and I have to see my words in your essay. When you turn in the final draft, if it doesn't have my key words that I've given you, I'm going to give it back to you..." Then other kids, I'll say, "I want you to fill this out but you can change it when you go to draft." Other kids I'll just hand it to them and say "Just use that as a guideline," you know.

Teagan allowed students to decide for themselves how much they would adhere to the graphic organizer by having the quality of the students' work demonstrate the degree to which the graphic organizer was needed:

There have been a few who have said, "I won't need it at all."...I'll let them try it without it, [but] then I give them a D and say, "Here's why you got a D. It was missing this and this...and you forgot to mention this, and there's no context. If you'd filled this out, all of that would be done."

Ultimately, Teagan envisioned writing as an integral component of the reading process. About writing assignments for *One Flew Over the Cuckoo's Nest*, he explained, "Everything came from reading, you know?" For Teagan, writing was an essential extension of the meaning-making process. Teagan's system for teaching writing explicitly guided students through the process of writing an analytical essay, and the graphic organizer allowed Teagan to help students follow the formula while differentiating his instruction.

Disciplinary Literacy. Teagan described his role as a teacher as "making it real and making them want to read and understand why they should be reading and how it can really mean something for them." Teagan explained,

One of the joys of teaching English is that you're just a storyteller...Lots of times they think we're wasting time and we're all joking around telling funny stories, but really what we're doing is making meaning out of the text, you know?

Teagan's adept storytelling drew students in, motivated them to create connections between their lives and the text, and made the task of learning about literature fun.

Teagan's English instruction related to a broader theme for the class: identity. Teagan used this theme to teach how writers compose stories: "Then we're using that theme to get at how writers build identity through characters, symbolism, conflict." By knowing how writers compose stories and build themes using literacy techniques, Teagan provides students insight into how to read and make meaning of the text.

To organize their instruction, Teagan uses thematic units. He explained, “Thematic units give [students] a reason to want to come to class...And so everything is designed thematically for me because I think thematic units are more real for students.” Teagan’s units related to different aspects of the broader theme of “identity... Who are you and who will you become is the theme of the year. It’s always something around identity and how do we determine our identity.” Each of Teagan’s units included “one aspect of identity and then appropriate text.” For example, he selected *One Flew Over the Cuckoo’s Nest* because “it was, what’s the influence between society and society’s roles and identity.”

Teagan used numerous strategies to help students engage with the text and make meaning. Teagan taught students about one formula writers use when writing novels with the theme of identity, Joseph Campbell's (1949) *The Hero’s Journey*. “I taught them Joseph Campbell’s formula for the hero’s journey: departure, initiation and return...” Teagan discussed reinforcing the students’ understanding of this strategy using movies:

We’ve actually watched bits and pieces of like 50 different movies, and I gave them a master list of movies that follow the hero’s journey; it’s like 100 movies on it. They had to pick one and watch it and then write a report on it... Every book we’ve read this year follows this plot outline.

Teagan explained the value in teaching students a formula for how stories of identity are composed:

And because we’re doing the hero’s journey, and I’ve just been beating them over the head with the formula for the hero’s journey, they basically know how the story’s going to end, so since they know how the story’s going to end, they can see where it’s going, so they’re able to piece it together a lot more easily.

By understanding how the story was composed, students were able to explore the individual pieces of the story rather than tackling the analysis of the text in its entirety.

Teagan used graphic organizers and the formula for The Hero's Journey (Appendix H) to support students' analysis of the text. Teagan saw the value of the graphic organizer in that "it also helps them...understand what they're reading." The map included each component of The Hero's Journey. As students read, they filled in the map (i.e., the graphic organizer) as a class while Teagan guided the students to think about the text. As they worked, Teagan asked students to find textual evidence to support their analysis:

So for each step of the way, we have what happens in the novel that fits that and then a piece of text evidence...And so I've been kind of bouncing back and forth between [rereading and] just the work of filling out the web; like that's kind of a lesson plan, like we're going to fill out the web, but that takes us through the book.

To help students identify passages that support their analysis, he taught students to look for objects in the text, which helps them locate passages ripe with evidence:

And so that's an exercise we do with every text, like what objects do you see and where's the meaning... We always try to find text evidence that has an object in it, and that's how you know that out of all the things that he says, this is going to be the most important, because it contains not only a conversation that tells us what's happening but also an object that usually is packed with meaning.

Teagan made sure the texts he selected supported students' use of this strategy:

"When I select texts I choose books that have very clear objects, so there's like things that they can look for." Looking for objects gave students a strategy for identifying symbolism in the book. They then used those passages as textual evidence within their graphic organizer. Finally, Teagan used the graphic organizer to help students generate text for the analytical essays:

They can also use this to write their paper because the paper topic is, how does the novel fit the hero's journey and what does the novel mean basically, and so they can use this to plan out their paper; they've got all their text evidence and all their ideas already plotted out.

Teagan also used assistive technology to support his approach. He explained how the software program *Inspiration* had a feature that allowed students to turn their graphic organizer into an outline (Appendix I). His students used the outline to fill in the analytic writing graphic organizer.

Teagan's English instruction was designed to teach students how to find meaning and how to make meaning from the text. He did so using a combination of strategies specific to the discipline of English, such as explicitly teaching students the formula for The Hero's Journey, and by supporting students in identifying literary techniques (e.g., symbolism, and how to locate symbolism through objects in the text). He also employed more general strategies not specific to the discipline of English, such as graphic organizers and the use of assistive technology software, to support students' learning. Finally, he "makes it real" by organizing the class around thematic units focused on different components of the literary theme, identity.

Summary

Teagan's framework for teaching incorporated his complex understanding of the relationship between students' literacy skills, how to make learning meaningful to students, and students' postsecondary success. Teagan's framework for teaching focused on skill development, the maintenance of skills, and preparing students for future classes. Most importantly, though, he wanted to make learning meaningful so that his students would be motivated to use skills independently. Teagan also understood the importance of repetition for enabling students with LD to transfer skills from his classroom to other contexts. His instruction focused on developing students' skills in reading and writing, while using the content of English to teach students how to enjoy making meaning from text.

Conclusion

Descriptions of the teachers' lived experiences were derived from my analysis of how they conceptualized their instruction and their framework for teaching. The teachers' frameworks included their conceptualizations of (a) developing literacy skills with an eye toward the future, (b) understanding students' LD, and (c) designing instruction to further students' learning. Below is a synthesis of each theme across the three teachers. For each theme I present a summary of each individual teacher and then discuss the similarities and differences that emerged across teachers.

Developing Literacy Skills with an Eye Toward the Future

Wright's framework for instruction consisted of learning literacy skills, which he calls tasks and aptitudes that would assist students in their literature classes and were fundamental to students' success in postsecondary English classes. The literacy tasks consisted primarily of literacy skills that were essential to students' postsecondary success regardless of content, such as reading and writing (e.g., reading text in a limited amount of time). The literacy aptitudes consisted primarily of domain-specific literacy skills that were unique to the content of English. Wright's instruction focused on both tasks and aptitudes, as he found both equally important.

Geoffrey's framework for teaching focused on intellectual skills, or the skills students need to develop to succeed in high school world history courses and postsecondary liberal arts settings. Geoffrey conceptualized his framework for teaching as an instructional routine that integrated reading, writing, and content instruction. Geoffrey focused on the necessity of literacy skill development, prioritizing literacy skills instruction over content instruction, but he also saw value in teaching content. He felt it was the content that motivated students to learn.

Teagan's framework for teaching emphasized students' literacy skills, meaningful learning experiences, and skills needed to succeed in postsecondary settings, including college. Teagan focused on skill development with an eye toward maintaining the gains students made in other classes and preparing students for future classes, life, and jobs. He also knew that students would not be motivated to maintain skills independently unless the instruction was meaningful. Meaning, motivation, and skill development were equal priorities in Teagan's instruction.

Although all the teachers saw merit in general literacy skill development and the literacy skills specific to their discipline, each teacher prioritized aspects of their instruction differently. Wright conceptualized general literacy skills and discipline-specific literacy skills separately. Geoffrey, on the other hand, conceptualized his framework for teaching as an instructional routine that integrated general literacy skills with literacy skills specific to his discipline. When making instructional decisions, Geoffrey valued general literacy skills over discipline-specific literacy skills. Furthermore, both Teagan and Geoffrey felt that content instruction was important because of the role it played students' motivation, though the belief in the importance of "meaning making" in content instruction was more prominent in Teagan's interviews than in Geoffrey's.

Understanding Learning Disabilities

Wright's framework for instruction attempted to address what he saw as the literacy difficulties that students with LD experienced. He saw how the difficulties students with LD encountered—such as weaknesses in background knowledge, making connections, sequencing events, and writing fluency—interfered with their ability to

perform and develop the literacy skills necessary for learning content and for postsecondary education.

Geoffry also demonstrated a keen understanding of how students' LD influenced their ability to perform general literacy skills, such as accessing, retaining, and demonstrating their knowledge. He also acknowledged that content learning was especially challenging for his students.

Teagan saw a connection between students' learning differences, their motivation, and their ability to find learning meaningful. His framework for teaching emphasized skill acquisition and making repetitive skill instruction meaningful. He knew students would need a tremendous amount of repetition before using skills independently in other contexts.

All three teachers saw how students' skill deficits complicated the teachers' attempts to help them learn academic content and learn the skills they would need to be successful adults. Wright and Geoffrey emphasized the role LD played in developing literacy skills. Teagan, however, was the only teacher who emphasized the important contribution that motivation and positive relationships made to students accomplishing the goals he set forth.

Designing Instruction to Further Students' Learning

Wright believed that knowing the students' needs would help him design instruction that would either enable students to develop the skills they needed to be successful with more demanding academic content in postsecondary settings or enable them to compensate for their deficits. Wright repeatedly described how his instruction addressed the literacy skills students needed while simultaneously supporting them in accessing the content. For reading instruction, Wright used audio recordings of text;

repeated reading, notating, note taking; and the Questioning the Author strategy to develop skills and to support students' access to content area reading. He used computers, graphic organizers, and rubrics as the primary means of supporting writing instruction, and he used explicit instruction to develop students' writing skills. He also used the Questioning the Author strategy to model for students how experts read and think about text. He exposed students to a variety of genres and used *Understanding by Design* to create Essential Questions, which he then used as writing prompts. Wright's instruction demonstrated how reading and writing skill instruction and discipline-specific instruction could be interwoven to provide students with explicit content area instruction.

Geoffrey believed his knowledge of students' learning needs was useful when designing instruction. Mostly, he used this knowledge to help students develop necessary literacy skills. Geoffrey used instructional routines to help students access information in the text, retain information, and demonstrate their knowledge in writing. He did this by prioritizing skill development, specifically writing instruction, over content instruction. Geoffrey's instruction in reading involved minimizing the content students were exposed to, first by decreasing the amount of text students had to read. Geoffrey also taught students to use audio recordings of the text and visual images to support their reading, as well as to use structural analysis to support vocabulary development. His instructional routine included strategies for analyzing text and then taking information from the text and turning it into a written product. He taught students to read, underline, and take notes using the Cornell note system. Then, he showed students how to use these notes to create an outline and to write summary paragraphs of their reading. Even though Geoffrey valued skill development, he used the content of

his English course to teach students discipline-specific literacy skills. Geoffrey relied on the strategies presented in *Understanding by Design*—particularly the Essential Questions—to help students analyze text. The Essential Questions allowed Geoffrey to focus students' learning on the big ideas and to guide their approach to reading and writing about the text. Finally, he used the Essential Questions to design year-end exams. The Essential Questions enabled Geoffrey to accomplish his goal of minimizing the amount of content students read and provided a context for teaching his literacy routine.

Teagan designed his instruction to create a meaningful context for learning skills. He felt that creating a meaningful context would help students practice skills they had learned in previous classes and develop the motivation to maintain those skills in the future. Teagan created opportunities for repeated practice using the same instructional systems for each aspect of his instruction. Teagan organized his reading instruction using a strategy called RAP Q. He used a variety of graphic organizers to help students learn how to write using different story structures. He also organized his English content instruction according to themes to motivate students and to create a context for integrating English, writing, and reading instruction.

There are more similarities than differences between the strategies the teachers used for teaching reading, writing, and disciplinary literacy. All three teachers discussed using audio recordings of text, underlining, and notating to support reading, and they all used structures for improving students' writing. Both Wright and Teagan used repeated reading of text to support comprehension. Both Wright and Geoffrey used *Understanding by Design* to create Essential Questions that could be used to facilitate note taking. Geoffrey and Teagan organized their units thematically. They also used

visual aids to support reading, outlining to assist students with writing, and summarizing to improve comprehension (Teagan) or writing (Geoffrey).

Each teacher also used strategies the others did not. Wright used the Questioning the Author strategy for reading comprehension, whereas Teagan used RAP Q. Wright also discussed using computers and rubrics for writing, as well as exposing students to different genres of text. Geoffrey was the only teacher to discuss using structural analysis to support vocabulary instruction. Teagan was the only teacher to discuss reading schedules, creating a chapter title, dog-earring pages in the book, *The Hero's Journey* and its accompanying graphic organizer, and using objects and symbolism in instruction.

The teachers emphasized different strategies based on what they valued. Wright relied on the Questioning the Author strategy, *Understanding by Design's* Essential Questions, audio recordings of the text, and explicit writing strategies to integrate skill instruction with English content instruction in order to bridge the gap between what students could do and what they were expected to do in a high school literature course. Geoffrey used *Understanding by Design's* Essential Questions to frame the rest of his instruction. Essential Questions helped Geoffrey's students focus on specific aspects of the content and provided Geoffrey with an anchor for teaching students a literacy routine for learning the reading and writing skills he so valued. Teagan focused most of his efforts on creating meaningful contexts for learning skills. He used the same instructional strategies and routines to help students maintain what they had learned in previous classes and practice to fluency the skills they would need to employ independently in the future. According to Teagan, such repetitive instruction required a meaningful context for instruction—otherwise, his students would never be able to

engage in the repetitive practice that would allow them to use the skills independently. Thus, all three teachers emphasized skill development in their instruction, but how they prioritized it in relation to content instruction differed based on their goals for their students' future and the role they saw students' learning difficulties playing in those goals.

Features of Expert Teachers' Cognition

These teachers' cognition demonstrated features not uncommon in studies of other experts. The teachers all demonstrated knowledge in multiple domains, including knowledge of their content area and the disciplinary-specific literacy practices needed for processing the content, knowledge of how to teach literacy, and knowledge of how the reading and writing process breaks down for students with learning disabilities. Their knowledge was integrated. For example, the teachers' knowledge of their students' learning disabilities permeated their discussion of their content and their discussion of literacy instruction, and visa versa. Furthermore, the teachers were all able to combining explicit, evidence based strategies with discipline specific strategies. The teachers used mental models, or schemas, to guide their instruction. This was evident in the teachers' discussion of routines and processes for addressing specific aspects of instruction. The teachers used both goal-driven and data-driven processing. This was evident in the vision teachers had for their students, in which they situated their students as both short-term and long-term learners. The teachers' all used data from the students' performance in the process of situating them within this trajectory of learning. All of the teachers used deliberate practice, as was evident by their drive to learn about their students, to learn from and apply strategies presented in professional development at the school. Finally, all of the teachers had a propensity for strategic

processing, as was demonstrated by the ways in which these teachers appropriately employ their knowledge while balancing the complex needs of various students. This enabled the teachers to accomplish the sophisticated conceptualization demonstrated in their frameworks for teaching.

CHAPTER 5 DISCUSSION

Discussion

Considering the increasing rate at which students with learning disabilities (LD) take content area classes in general education settings, and the literacy difficulties many students with LD face, a study exploring the nature of expertise in special education content area teachers' literacy instruction was timely and necessary. The premise of this study was that expert content area teachers, with access to extensive professional development around teaching literacy to students with LD, would be capable of addressing content area literacy needs and the severe reading issues exhibited by students with LD (Faggella-Luby, Graner, Deshler, & Drew, 2012). I designed this study to provide insights into the cognition of such expert teachers, with the ultimate purpose of developing an understanding of expertise in teaching literacy in the content areas to secondary students with LD. In this study I used hermeneutic phenomenology to explore teachers' perceptions of teaching literacy within their content area to secondary students with LD, answering the question, *How do expert secondary content area teachers conceptualize teaching literacy in their content area with students with learning disabilities?* New and enhanced understandings of this phenomenon could lead to new practices and better professional development for secondary content area teachers serving students with LD.

Using five interviews, I obtained experiential descriptions from the participants. Following a modified hermeneutic model of van Manen's (1984) method of phenomenology, I engaged in an analysis that included four concurrent procedural activities and consisted of 10 steps (see Figure 3-2). From this analysis I derived descriptions of the teachers' lived experiences to reflect their framework for teaching.

The teachers' frameworks for teaching included their conceptualizations of (a) developing literacy skills with an eye toward the future, (b) understanding students' learning disabilities, and (c) designing instruction to further students' learning.

In this chapter, I discuss connections between my findings and the extant literature in secondary content area teachers' expertise and special education teachers' expertise, and the extant literature in content area and disciplinary literacy instruction. I further discuss the limitations of this study. Finally, I discuss the implications of this study in regards to the features of cognition these teachers demonstrated and the broader study of expertise. I conclude with a discussion of necessary and potential future research.

Connections with the Extant Literature

The results of this study are relevant for researchers interested in the study of expertise among secondary content area teachers and special education teachers. Prior to this study, no studies existed exploring the nature of secondary special education content area teachers' expertise. Furthermore, no studies existed of such teachers' literacy instruction within their content areas. Although there are limitations to this study, the findings extend and support existing research and theory and have several implications for future research.

Secondary Teacher Expertise in the Content Areas and Special Education

The extant literature included 12 studies that examined expert teaching in the content areas and 1 study that examined expert teaching in special education. Across these studies, only four consistent findings emerged. First, the concept of flexibility emerged in every content area except social studies and special education. Second, the importance of teachers' past professional experiences (i.e., education and teaching

experience) was a consistent finding in all domains. Third, the importance of teachers' knowledge was a consistent finding across all domains. Fourth, expert teachers appeared to have a perspective or emphasis on a particular aspect of their content, and they were able to rationalize instructional decisions based on that perspective or emphasis. As these were the strongest findings from the literature in secondary content area and special education teacher expertise, I will discuss the findings of this study in terms of the prior consistent findings and the literature from which they came.

Flexibility. In the review of the extant literature, the concept of flexibility emerged as a quality of expertise in every domain except social studies and special education. In English language arts, both Tochon and Munby (1993) and Jay (2002) found that novice teachers' discussions of various aspects of their teaching reflected less flexibility than expert teachers' discussions. In Tochon and Munby's study, the expert teachers approached lesson planning and instruction in ways that enabled them to be more responsive to students during instruction. In Jay's study, expert teachers moved flexibly between different types of conversation about observations of their own lessons. In mathematics, Livingston and Borko (1990) conceptualized flexibility as improvisation that enabled teachers to be more responsive to students. In science, both Meyer (2004) and Moallem (1998) found that expert teachers made flexible decisions and that expert teachers' rationale for why they changed their instruction revealed a great deal about their thinking. Thus, the concept of flexibility was a major finding across many studies of secondary teacher expertise.

In this study, all three teachers demonstrated flexibility in how they conceptualized designing instruction to be responsive to students' LD. For example, Wright demonstrated flexibility in his discussion of comprehension instruction when he

explained that his extensive experience enabled him to anticipate where students would likely encounter comprehension difficulty and to create a flexible plan for instruction. Geoffrey demonstrated flexibility when he discussed using the school assessment to help him develop class profiles and then designed literacy skill instruction tailored to the class profile. Teagan demonstrated flexibility in his belief that teachers have to do “what works” and continually make instructional changes based on the students’ abilities. Thus, this study supports and extends previous research by finding that the teachers demonstrated flexibility in their discussion of their lived experiences.

Past Experiences and Knowledge. Previous research has also shown that teachers’ past experiences and knowledge played a role in teachers’ expertise. These findings will be discussed together, as they are interrelated. Although many researchers speculated that the difference between experts and novices was experience (Brooks, 2010; Gudmundsdottir & Shulman, 1987; Jay 2002; Meyer, 2004; Moallem, 1998; Sabers et al., 1991) or knowledge (Livingston and Borko, 1990; Moallem, 1998), only Moallem examined how experience and knowledge interacted and influenced teachers’ expertise, and she supported this conclusion with evidence. Moallem (1998) found that the expert teacher’s past experiences related to how the teacher saw herself, her students, and her instruction and that they were a significant source of her professional and pedagogical knowledge; thus, knowledge and experience interacted with one another. Moallem (1998) also described, in detail, the types of knowledge (i.e., knowledge of self as a teacher, knowledge of the content and curriculum, knowledge of pedagogy, knowledge of students, and knowledge of the context) the expert teacher demonstrated and how that knowledge influenced her practice.

Although I did not design this study to examine how teachers' knowledge or experience interacted with their expertise, the teachers did demonstrate knowledge and referred to their experiences in their discussion of their lived experiences. How these interacted with each other and influenced their expertise was beyond the scope of this analysis. There were two types of past professional experiences considered in this study: teachers' formal educational experiences and teachers' formal and informal professional development. I will discuss these, as well as the knowledge teachers demonstrated that may have been the result of these experiences.

All three teachers in this study had received degrees in their content areas. Wright obtained a bachelor's degree in English from Columbia University in 1979, a master's degree in creative writing from Boston University in 1989, and a doctorate in English from Boston University in 1995. Geoffrey obtained a bachelor's degree in history from Haverford College in 1978, a master's degree in education from the University of Pennsylvania in 1985, and a second master's degree in world history from Villanova University in 2000. Teagan obtained a bachelor's degree in English from Saint Joseph's University in 1995. The knowledge they developed during these education experiences was evident in discussions of their lived experiences. Wright demonstrated knowledge of his content area by selecting texts that are representative of the genres of English, and his knowledge of literature seemed to help him identify the big ideas of instruction and develop guiding questions for the students. Wright also demonstrated how his experiences as a student and a doctoral student teachers' assistant in postsecondary settings in his content area played a role in his understanding of the difficulties students would face, his goals for students' futures, and the skills they would need to develop to meet those goals in this content area. Geoffrey

demonstrated knowledge of his content by organizing his instruction around historical themes and by developing essential questions, in which he identified what concepts were vital to students' understanding of the content. Geoffrey's knowledge of his content enabled him to decrease the quantity of text students had to read while still including what was most essential to students' understanding. Teagan demonstrated how important his past experiences were by using the content of English, stories, to motivate students and to help them see the value in reading. Teagan's knowledge of how writers compose stories, and build themes using literacy techniques, enabled him to provide students insight into how to read and make meaning of the text. His knowledge of the content enabled him to select texts that served multiple purposes. Although this study did not examine whether these experiences led to this knowledge, I assumed that the teachers developed content knowledge from their formal educational training.

The teachers' past informal and formal professional development experiences were also very important in how they conceptualized their instruction. All of the teachers had various exposures to pedagogy and literacy prior to working at this school. Although none of the teachers in this study had significant prior professional training in special education, they had attended extensive professional development after becoming teachers in their school. Wright reported participating in at least 20 hours of professional development over the past year and reported participating in "20 conferences, plus 3 summer sessions on O-G [Orton Gillingham], plus innumerable in-school training programs" in teaching students with disabilities over the past decade. Geoffrey reported attending at least 37 hours of professional development in teaching students with disabilities. Teagan explained that, from the time he arrived at this school,

he had worked closely with other teachers in mentor/mentee relationships to learn techniques for working with students with LD, in addition to the numerous formal and informal professional developments he had attended. In spite of the teachers' lack of preservice training in teaching students with LD, all of the teachers in this study demonstrated knowledge of how to teach literacy and how the reading process breaks down for students with disabilities. Wright discussed using the Essential Questions, a strategy he obtained from a professional development training Wiggins and McTighe held at the school based on their book *Understanding by Design* (2005), to enable students to engage with the content regardless of their current ability level. Teagan discussed using a writing strategy, which he obtained from a professional development training held by Judith Hochman based on her book *Teaching Basic Writing Skills: Strategies for Effective Writing Instruction* (2009), to help students write summary paragraphs to support their comprehension. Geoffrey also attended the *Understanding by Design* and the *Teaching Basic Writing Skills* professional developments, and he discussed using (a) *Understanding by Design* to develop Essential Questions to guide his rewriting of the text, minimizing the amount of reading students in his class had to engage in and (b) Judith Hochman's writing strategy for note taking, outlining, and writing summary paragraphs. As all three teachers referenced either one or both of these professional development trainings we can attribute at least a portion of their knowledge to these professional development experiences.

Although not the direct focus of this study, the teachers' past professional experiences and the knowledge the teachers developed from those experiences did play a role in their conceptualizations of their teaching. These findings support prior research indicating that preservice professional learning opportunities influence experts'

conceptualization of their instruction. The current study, however, extends the previous research to demonstrate how expert teachers can use inservice professional development to access additional information about how to educate students with and without disabilities to inform their understandings of how to translate their disciplinary knowledge for students with LD. Furthermore, the teachers conceptualizations of their teaching demonstrated these three knowledge bases were highly integrated, with teachers knowledge of their content, teachers understanding of their students learning disabilities, and their approach to designing instruction in literacy influencing each other.

Perspective or Emphasis. In my review of prior research I found that in two domains, social studies and English language arts, expert teachers appeared to have a perspective or emphasis on a particular aspect of their content, and they were able to rationalize instructional decisions based on that perspective or emphasis. In social studies, teachers rationalized their teaching based on their understanding of the content (Brooks, 2010; Gudmundsdottir & Shulman, 1987). In English language arts, Gudmundsdottir (1991) found that the expert teacher had a pedagogical model that guided her questioning of students, though there was incongruence between the teacher's stated model and the model Gudmundsdottir thought was actually guiding her teaching. Although the importance of a perspective or emphasis and the ability to rationalize one's decisions emerged explicitly in only these two studies, other research hinted at the importance of teachers' instructional perspective or emphasis. Moallem (1998) discussed how the teacher's past experiences related to how she saw herself, her students, and her instruction, which could imply the presence of a perspective.

This study supports previous research by finding that expert teachers appeared to have a perspective or emphasis of their content. The study extends previous

research by finding that teachers with expertise in special education and literacy, in addition to their content had a perspective or emphasis in not only their content, but also on special education and literacy. Their perspective or emphasis integrated all three domains. Teachers in this study discussed how instruction in reading, writing, and disciplinary literacy were integral components of their instructional design. They discussed their goals for their students' futures and considered the impact of LD on students' learning. Their perspectives reflected the ways in which they saw these different emphases relating to each other and emerged as a framework for teaching. The findings of this study further support and extend the findings from prior research, which indicated that experts were able to rationalize instructional decisions based on that perspective or emphasis. Although this study did not examine the decisions teachers made during instruction, the teachers in this study rationalized, based on their framework for teaching, how they conceptualized designing instruction to further students' learning. All three teachers emphasized literacy skill development in their instruction, but how they prioritized it in relation to the content differed; these differing priorities reflected their goals for students' futures and the role they saw students' LD playing in those goals.

Literacy Instruction in the Content Areas

Because of the challenges all students experience when the literacy requirements of content area texts increase, advocates have argued for the inclusion of literacy instruction in content area classrooms for more than a decade (Monte-Sano, 2011; Mraz, Rickelman, & Vacca, 2009). Researchers have long believed there is great value in teaching literacy in the content areas, for both improving literacy skills and content area learning (Anders & Levine, 1990; Bean, 2000; Dishner & Olson, 1989;

Moore, Readence, & Rickleman, 1983). Two strategies for teaching literacy within the content areas exist: content area literacy instruction and disciplinary literacy instruction. As these are the two main approaches to teaching literacy within the content areas, I will address what we know about each strategy in terms of students with LD, and I will discuss my findings in light of this literature.

Content Area Literacy Instruction. One strategy for integrating literacy instruction into content area classes, called content area literacy, is grounded in the notion that all reading, regardless of the content area, requires similar cognitive processes (Fang, 2012). As such, more general literacy strategies have been promoted, such as summarizing, outlining, and using graphic organizers (Johnson, Watson, Delahunty, McSwiggen, & Smith, 2011; Monte-Sano, 2011). These general practices have been found useful across many different content areas (Heller & Greenleaf, 2007; Moje, 2008), especially for students with LD (Faggella-Luby, Graner, Deshler, & Drew, 2012). For a list of effective reading comprehension strategies, see Mastropieri, Scruggs and Graetz's (2003) review, which features effective reading intervention strategies for secondary struggling students, and see Berkeley, Scruggs and Mastropieri's (2010) meta-analysis of reading comprehension interventions for students with LD. Furthermore, Scruggs, Mastropieri, Berkeley, and Graetz (2009) conducted a meta-analysis of the effectiveness of special education comprehension strategies in all students' learning of secondary content, identifying the following strategies as effective and measuring their effectiveness: mnemonic strategies (ES=1.47); spatial or graphic organizers (ES=0.93); classroom learning strategies (ES=1.11); computer-assisted instruction (ES=0.63); study aids (ES=0.94); hands-on or activity-oriented learning (ES=0.63); and explicit instruction (ES=1.68). For students

with LD, the inclusion of literacy instruction offers more opportunities to practice literacy skills and to do so in the context in which they are needed (Ehren, Deshler, & Graner, 2010).

Each teacher in this study used a variety of the general literacy strategies found to be effective with content area learning for students with LD. All three teachers discussed using audio recordings of text, underlining and notating text, cognitive strategies to support reading, graphic organizers to help with reading and writing, and, more generally, explicit instruction. Furthermore, each teacher used strategies the others did not: Wright used computers and rubrics for writing, Geoffrey used morphology to support vocabulary instruction, and Teagan used reading schedules. Prior research has demonstrated that these instructional strategies are effective with students with LD and content area learning; every general strategy used by these teachers was, in fact, evidence-based and, furthermore, evidence-based for students with LD.

Disciplinary Literacy Instruction. Disciplinary literacy advocates believe that literacy is content specific and that understanding the oral and written language of a discipline requires more than just the ability to decode and comprehend the text (Shanahan & Shanahan, 2008). It also requires that students understand the “ways of thinking” associated with a discipline (Monte-Sano, 2011). Shanahan and Shanahan (2008) explored how experts in different disciplines read texts and found that experts used distinctly different approaches depending on the discipline in which they were trained. Furthermore, the texts themselves varied significantly across subjects, containing different vocabulary and text structures specific to the discipline (Moje, 2010). Although a great deal of research on the impact of content area literacy has

been conducted with students with LD, very few studies have explored the effectiveness of disciplinary literacy instruction on the learning of such students (Faggella-Luby et al., 2012). Faggella-Luby and colleagues (2012) examined studies in disciplinary literacy that included struggling adolescent learners. Although there were a number of questions related to the design, quantity, and focus of these studies, and although these studies almost exclusively (with one exception) focused on English language arts content, some discipline-specific strategies in English language arts and history were identified as having potential for further research. These strategies included story mapping, self questioning, theme identification, story mnemonics, story planning and monitoring, character development, story grammar, integrated reading and writing, story webs, and historical reasoning and content.

The teachers in this study used discipline-specific strategies in combination with reading comprehension strategies that have been shown to be applicable across a variety of disciplines. Wright primarily used the *Questioning the Author* strategy to model to students how experts in English read and think about text. He exposed students to a variety of genres and used *Understanding by Design* to create essential questions as writing prompts. Geoffrey primarily taught disciplinary literacy using *Understanding by Design* and essential questions. He also organized his instruction by historical themes, connected students' learning to modern-day events, and used both primary sources and visuals to accompany textbooks. Teagan organized his instruction by literary themes and taught *The Hero's Journey* as well as other literary techniques around storytelling. Because there is extremely limited research on effective disciplinary strategies with students with LD, the effectiveness of these strategies is unknown. We only know that these teachers, identified as experts because of their ability to affect

student achievement, used these strategies in combination with evidence-based writing and reading strategies that are not discipline specific. Thus, this study extended the extant literature by providing one of the first studies of content area teachers' integration of general literacy strategies with disciplinary literacy strategies for students with LD.

Limitations

Although this study demonstrates that expert teachers providing instruction to students with LD are able to integrate their deep knowledge of their discipline and effective strategies for teaching students with LD, there are several limitations. The primary limitation of this study was the small number of participants and the small number of content areas represented. Secondary teachers provide instruction in a variety of content areas from 6th grade through 12th grade. The inclusion of more participants, representing more grades and subject areas, could alter, enhance, or refine the understandings that emerged during this study.

Implications

In the past several decades, there has been a strong move toward including students with LD in general education classrooms. Eighty percent take one or more academic courses in general education settings (Newman, Wagner, Cameto, & Knokey, 2009). These content courses place considerable reading and writing demands on students with LD, because reading and writing are the primary vehicles for learning in these classes (Chall, Jacobs, & Baldwin, 1990; Deshler et al., 2001). Because approximately 80% of students with LD demonstrate difficulty with reading, the significant difficulties they experience with reading and writing impede their progress in content classes (Deshler et al., 2001; Kavale & Forness, 1999). Thus, the success of students with LD in content area classes depends on teachers' ability to support student

literacy needs in their content area instruction. Unfortunately, few general education teachers are prepared to teach students with LD (Cortiella, 2011).

The premise of this study was expert teachers would be capable of addressing content area literacy needs and the severe reading issues exhibited by students with LD. Wright, Geoffrey, and Teagan's choice of evidence-based literacy strategies for students with LD supported this premise. I also presumed expert teachers in this study would demonstrate properties of expertise in their cognition. First, the research in the broader study of expertise and in special education and literacy (Alexander, 2003; Alexander et al., 2004; Brownell et al., 2009; Johnson et al., 2011; Spear-Swerling, 2009; Spear-Swerling & Brucker, 2004) suggested that the expert teachers in this study would have well-integrated knowledge of multiple domains, including knowledge of their content area and the disciplinary-specific literacy practices needed for processing the content, knowledge of how to teach literacy, and knowledge of how the reading and writing process breaks down for students with learning disabilities. The three expert teachers in this study demonstrated well-integrated knowledge of all three domains, evident in their ability to combining explicit, evidence based strategies with discipline specific strategies, and by the prevalence of their understanding of their students' LD throughout their discussion of literacy instruction. Furthermore, the research in the broader study of expertise suggested these teachers would have a propensity toward strategic processing. The ways in which these teachers appropriately employed their knowledge while balancing the complex needs of various students demonstrated strategic processing (Alexander, 2003; Alexander et al., 2004).

Beyond these few properties drawn from the broader research on expertise upon which this study was built, features of these teachers' cognition demonstrated a number

of additional properties of experts. The teachers used mental models, or schemas, to guide their instruction. This was evident in the teachers' discussion of routines and processes for addressing specific aspects of instruction. The teachers also used both goal-driven and data-driven processing. This was evident in the vision teachers had for their students, in which they situated their students as both short-term and long-term learners, and the teachers' use of data from the students' performance in the process of situating them within this trajectory of learning. The use of mental models/schemas and both goal-driven and data-driven processing are features of situation awareness. Situational awareness is defined as "the perception of the elements of an environment within a volume of time and space, the comprehension of their meaning and the projection of their status in the near future (Endsley, 1988 as cited in Endsley, 2006, p. 634)." Situational awareness is a feature of expertise that allows the expert to "be ahead of the game" giving them the ability to understand complexity and anticipate outcomes (Endsley, 2006, p. 633). In addition to situational awareness, all of the teachers used deliberate practice, as was evident by their drive to learn about their students, and to learn from and apply strategies presented in professional development, acting as scholars alongside their students. The use of deliberate practice has been proposed as being the difference between those who have developed expertise as a result of their experience, and those who have not (Ericsson, Prietula, & Cokely, 2007).

These findings raise questions about the assignment of underprepared teachers to secondary content area classes for students with LD. Specifically, teachers who lack the following will likely be unable to accomplish the sophisticated conceptualization and enactment of instruction that the teachers in this study demonstrated in their frameworks for teaching: (a) knowledge in multiple domains, including knowledge of

their content area, knowledge of how to teach literacy, and knowledge of how the reading and writing process breaks down for students with reading disabilities; (b) integration of such knowledge; (c) the propensity for strategic processing; (d) the propensity for situation awareness; and (e) the propensity for deliberate practice. Findings from this study show that effective teachers for students with LD are those who have deep preparation for and extensive experience with teaching their content and teaching students with disabilities. Furthermore, they have the propensity for strategic processing and situational awareness. Finally, their use of deliberate practice may be why they were able to develop their expertise. The deep knowledge for teaching students with LD may develop through extended professional development, but it remains to be seen whether such knowledge can be integrated with discipline-specific teaching knowledge if teachers have not developed discipline-specific teaching knowledge (i.e. are not content area experts) prior to attending professional development. Furthermore, how to design professional development that encourages the development of expertise and the features of expert cognition in these particular domains is unknown.

Future Research

The findings of this study provide some directions for future research. First, researchers must examine the use of disciplinary literacy strategies with students with LD. The teachers in this study used strategies they believed were effective, but sufficient research supporting use of these strategies does not exist. A second line of future research should explore the literacy practices these teachers used—specifically, how they integrated general literacy and disciplinary literacy strategies, and whether such integrated strategies are effective for students with LD. A third potentially important

area of research is how teachers develop such expertise. Developing a trajectory for the growth of teachers' knowledge from novice level to expert level would enable teacher educators to design professional learning experiences that support teachers' growth along this trajectory, from preservice teacher preparation to inservice professional learning experiences. As students with LD are increasingly included in general education content area classrooms, these lines of research will become increasingly important if we wish to reduce the achievement gap (Faggella-Luby et al., 2012).

APPENDIX A BACKGROUND SURVEY

The purpose of the survey was to procure information about the teachers past experience, both to select participate, and to use as a prompt during the phenomenological interview. Questions focused on their degrees obtained, courses taken, professional development attended, and teaching experiences.

Teacher Background Survey ¹	
<p>1. Do you consent to take this survey? ___ Yes ___ No</p> <p>2. What is your contact information? Name: _____ Address: _____ City/Town: _____ State: _____ Zip Code: _____ Email: _____ Phone: _____</p> <p>3. How many years have you been teaching at your school? ___</p>	<p>4. Please indicate the grade level(s) you teach this year. ___ Sixth ___ Seventh ___ Eighth ___ Ninth ___ Tenth ___ Eleventh ___ Twelfth</p> <p>5. Please indicate what subjects you currently teach. Subject 1: _____ Subject 2: _____ Subject 3: _____ Subject 4: _____</p>

2 Teacher Background Survey

6. How many years have you taught these subjects?

Subject 1: _____

Subject 2: _____

Subject 3: _____

Subject 4: _____

7. The 2011-2012 (current) school year represents which year of your teaching career?

8. Please indicate which of the following degrees you hold?

Bachelors

Masters

Specialist

Doctorate

9. Please indicate the subject area(s) in which you hold degrees. Beside each, please indicate the degree level (E.g. Biology, B.S.)

Degree 1: _____

Degree 2: _____

Degree 3: _____

Degree 4: _____

10. From what institutions did you obtain your degrees?

Degree 1: _____

Degree 2: _____

Degree 3: _____

Degree 4: _____

Teacher Background Survey 3

11. In what year(s) were you degree(s) obtained?

Degree 1: _____

Degree 2: _____

Degree 3: _____

Degree 4: _____

12. Do you hold any certifications? If so, what are you certified in?

Certification 1: _____

Certification 2: _____

Certification 3: _____

Certification 4: _____

13. Please indicate the number of courses taken during your educational training related to the following:

Teaching student with disabilities: _____

Teaching reading: _____

Teaching writing: _____

Teaching social studies: _____

Teaching mathematics: _____

Teaching science: _____

Teaching English/language arts: _____

Art: _____

World Languages: _____

APPENDIX B INITIAL INTERVIEW PROTOCOL

The purpose of the interview was twofold. The first goal was to elicit additional information, beyond that gathered in the survey, regarding the teachers' past and present experiences related to teaching students with LD, their content area, and literacy. The second goal focused on the knowledge teachers had about their content area, content area literacy instruction, and their students.

This is a semi-structured interview. While I may not ask each specific question, I will make sure to cover all of the topics. Additionally, I may highlight particular aspects of the teacher's survey, and ask for clarification or elaboration. For example, if a teacher wrote they had attended professional development in reading in the past year, I might ask them about what they learned, and was it useful in their classroom.

Inform the participant: "The purpose of this interview is to explore your knowledge about teaching, your content, about literacy and about teaching students with disabilities. I also want to explore how your past experiences led you to where you are and influenced what you do in the classroom." Begin the interview with the following question: "How did you come to teaching X grade, X content, here at your school? Can you describe what past experiences led you here?"

I will ask the following questions when appropriate, making sure to cover each topic:

1. Content Area
 - a) Describe your content area.
 - b) How is your content area structured?
 - c) What does it include?
2. Content Area Literacy Instruction

- a) How do reading and writing fit into your content area?
 - b) Are the texts students read in your content area different from texts in other content areas?
 - c) Do you need any special skills to read a text in your content area versus another content area?
3. General Knowledge of Students With Disabilities
- a) How well are students with disabilities able to perform within your content area?
 - b) What kinds of difficulties do they have?
 - c) How might your content area be harder or easier for students with learning disabilities than other subjects?
4. Knowledge of the Teachers Specific Students
- a) Can you describe the students in your classroom?
 - b) What are the needs of your students?
 - c) What goals do you have for your students?

I will close the interview with the following question: "Are there any additional experiences in your life you think have contributed to your knowledge, ideas, or beliefs about teaching students with learning disabilities in your content area?"

APPENDIX C THINK-ALLOUD INTERVIEW PROTOCOL

In the think-aloud interview the teachers will describe their planning process for a specific lesson. During the interview, teachers will be instructed to say out loud everything they are thinking as they plan their lesson.

Say to Teacher: “You should say out loud everything you’re thinking as you plan your lesson. This might seem awkward at first but remember, you’re just putting into words everything already going on in your head whether or not you think it is relevant. Put into words your specific steps as well as your rationale for your decisions. I’ll just ask a couple of questions. Our goal is to collect as much information as possible to help us understand the highly complex process you engage in as you plan.”

I will ask the following clarifying questions when appropriate:

1. What are some important things to consider when you are planning a lesson?
2. Describe any courses, workshops, books, curricula that influence your planning the lesson.
3. What’s the topic/purpose of this lesson? Why/How did you determine the topic of this lesson? By the end of the lesson, what do you want the children to know and do?
4. How is this lesson related to other lessons you will teach during the week? Month?
5. What materials did you use to plan this lesson? What made you decide to use these materials?
6. What activities did you include in this lesson? What made you decide to use these activities?
7. Are there any students that you think will struggle more (or be more successful) than other students? How will you respond to that in the lesson?
8. How will you determine whether your students have been successful with this lesson?

APPENDIX D ELICITATION INTERVIEW PROTOCOL

Ahead of this interview, I will review the observation, and identify moments in which I see teachers incorporating literacy activities/instruction, and supporting students' needs, both in literacy and learning the content. For example, in the observation a teacher may include a mini lesson on paragraph writing at the beginning of a lesson, using a graphic organizer. I will make note of this, in preparation for the interview.

An elicitation interview, in which both the researcher and participant watch the videotaped observation, will take place the following day. In the elicitation interview, teachers will identify moments in which they incorporated literacy instruction, or their instruction demonstrated support for student literacy needs, and/or in learning the content (such as the above example). They will be asked to elaborate on what knowledge they drew upon, and the source of that knowledge (e.g. "Where did you learn about using graphic organizers for paragraph writing?"). I will prompt the participant to explain the rationale behind their choice of practice (e.g. "I noticed that you did X. Tell me about that."). I may also point to moments in the instruction, and ask questions, such as "Why did you include X? How does X support students learning? How does X connect to the content you were teaching?"

Say to Teacher: "We are going to watch the video of your lesson. I am interested in understanding your knowledge and thinking about you content, literacy, and supporting students' literacy learning and needs while supporting their learning of the content. Stop the video at points in which you incorporated literacy activities/instruction and/or demonstrated support of the students' needs, both in literacy and learning the content."

After we have completed the video, I will ask the teachers a few follow up

questions:

1. What did you think about the lesson? What were the high points? What aspects of the lesson were not as satisfying to you?
2. In your planning interview, you said the goal of this lesson was for students to _____. Do you think this lesson successfully helped them achieve this goal? How do you know they achieved the goal? What evidence did you use?
OR What made you believe the students did not achieve your goal?
3. What would you do to improve the lesson if you have the opportunity to teach it again? Why would you make these changes?
4. What information did you gain from this lesson that will be useful in planning future lessons? Do you have any specific ideas for what you might do next time?

APPENDIX E
WRIGHT'S WRITING GRAPHIC ORGANIZER

HOOK: (Ask an interesting question/State an amazing fact/Give an intriguing quote)

SUMMARIZE 3 MAIN IDEAS OF THE NOVEL:

1.

2.

3.

THESIS: (Subject + Action Verb + Description, Response, or Opinion + 3 Reasons Why it is True)

BODY PARAGRAPH 1

TOPIC SENTENCE:

SUPPORTING DETAIL 1:

FIRST OF ALL,

EVIDENCE:

FOR EXAMPLE,

ANALYSIS:

HERE,

SUPPORTING DETAIL 2:

SECONDLY,

EVIDENCE:

FOR EXAMPLE,

ANALYSIS:

THIS DEMONSTRATES

SUPPORTING DETAIL 3:

LASTLY,

EVIDENCE:

FOR EXAMPLE,

ANALYSIS:

THIS CLEARLY SHOWS

TRANSITION:

OVERALL

BODY PARAGRAPH 2

TOPIC SENTENCE:

SUPPORTING DETAIL 1:

FIRST OF ALL,

EVIDENCE:

FOR EXAMPLE,

ANALYSIS:

HERE,

SUPPORTING DETAIL 2:

SECONDLY,

EVIDENCE:

FOR EXAMPLE,

ANALYSIS:

THIS DEMONSTRATES

SUPPORTING DETAIL 3:

LASTLY,

EVIDENCE:

FOR EXAMPLE,

ANALYSIS:

THIS CLEARLY SHOWS

TRANSITION:

OVERALL

BODY PARAGRAPH 3

TOPIC SENTENCE:

SUPPORTING DETAIL 1:

FIRST OF ALL,

EVIDENCE:

FOR EXAMPLE,

ANALYSIS:

HERE,

SUPPORTING DETAIL 2:

SECONDLY,

EVIDENCE:

FOR EXAMPLE,

ANALYSIS:

THIS DEMONSTRATES

SUPPORTING DETAIL 3:

LASTLY,

EVIDENCE:

FOR EXAMPLE,

ANALYSIS:

THIS CLEARLY SHOWS

TRANSITION:

OVERALL

CONCLUSION

RESTATE THESIS:

SUMMARIZE THE 3 MAIN IDEAS OF THE ESSAY:

1:

2:

3:

RELATE TO A LARGER TRUTH:

ULTIMATELY,

APPENDIX F WRIGHT'S WRITING RUBRIC

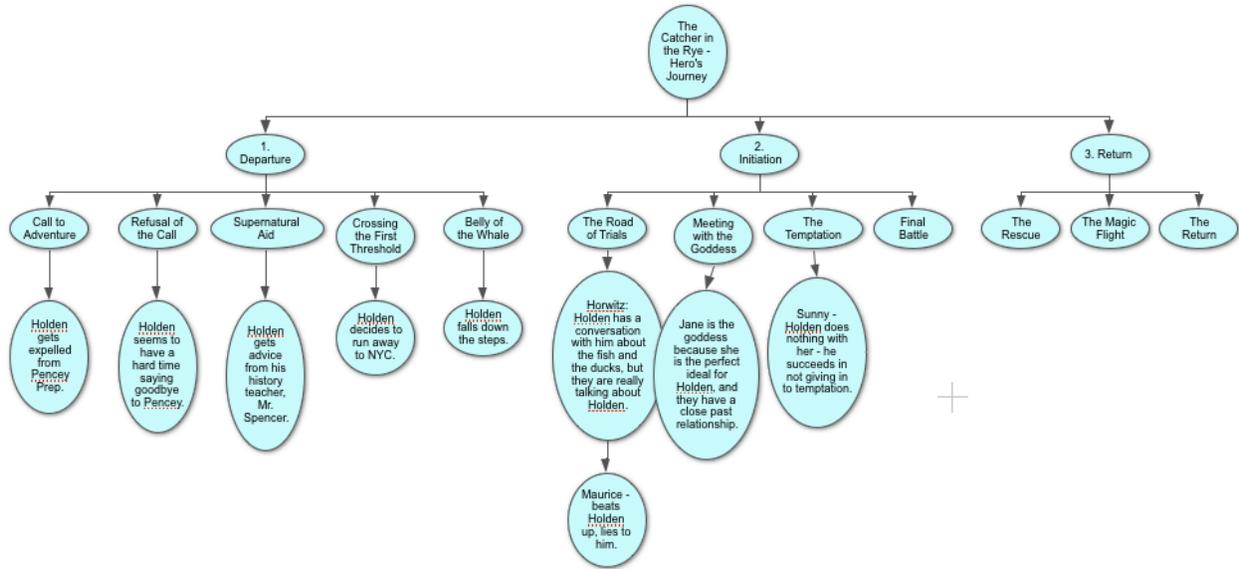
Student: _____ Date: _____ Teacher: _____ Total Points _____

	6	5	4	3	2	1
P R O C E S S	Brainstorm write /oral list; web; write write , etc.	Shows evidence of formulating many ideas about topic	Shows evidence of formulating some ideas about topic	Shows evidence of formulating few ideas about topic	Shows evidence of formulating one idea about topic	
	Outline	Shows clear, logical relationships between topic and all subtopics	Shows clear, logical relationships between topic and most subtopics	Some clear, logical relationships between topic and some subtopics	Shows clear, logical relationships between topic and few subtopics	
	Rough Draft	Includes all required information	Includes most required information	Includes some required information	Includes few elements of required information	
	Revision	All needed revisions made	Most needed revisions made	Some needed revisions made	Few needed revisions made	
	Editing/ Proofreading	All needed corrections made	Most needed corrections made	Some needed corrections made	Few needed corrections made	
M E C H A N I C S	Paragraphs	All have topic sentences , supporting details and concluding sentence	Most have topic sentence, supporting details and concluding sentence	Some have topic sentence, supporting details and concluding sentence	Few have topic sentence, supporting details and concluding sentence	
	Sentences	All clear, grammatically correct, varied and well structured	Most clear, grammatically correct, varied and well-structured	Some clear, grammatically correct, varied and well-structured	Few clear, grammatically correct, varied and well-structured	
	Spelling (W/Spellingcheck)	No more than 1 error/page	No more than 3 errors/page	No more than 5 errors/page	No more than 7 errors/page	
	Punctuation	No more than 1 error/page	No more than 3 errors/page	No more than 5 errors/page	No more than 7 errors/page	
	Capitalization	No more than 1 error/page	No more than 3 errors/page	No more than 5 errors/page	No more than 7 errors/page	
						Total Pts. _____

KEY: All = 100% Most = ~~Appx.~~ 75% Some = ~~Appx.~~ 50% Few/Little = ~~Appx.~~ 25%

	6	5	4	3	2	1
O R G A N I Z A T I O N	Introduction And Thesis	Creates interest, states main topic and previews paper's form	States main topic and previews paper's form	States main topic but lacks preview of paper's form	Weak main topic and no preview of paper's form	
	Sequence	All paragraphs contain supporting details placed in logical order	Most paragraphs contain supporting details placed in logical order	Some paragraphs contain supporting details placed in logical order	Few paragraphs contain supporting details placed in logical order	
	Transition	All transitions show clear connections among ideas; sufficient variety of transitions evident	Most transitions show clear connections among ideas; sufficient variety of transitions evident	Some transitions show clear connections among ideas; insufficient variety of transitions evident	Few transitions show clear connections among ideas; no variety of transitions evident	
	Conclusion	Leaves reader with clear significance of all of the writer's points	Leaves reader with clear significance of most of the writer's points	Leaves reader with clear significance of some of the writer's points	Leaves reader with no clear significance of the writer's points	
C O N T E N T	Citations	All sources for quotes and facts are relevant, integrated and explained	Most sources for quotes and facts are relevant, integrated and explained	Some sources for quotes and facts are relevant, integrated and explained	Few sources for quotes and facts are relevant integrated and explained	
	Support For Topic	All details relevant and support writer's argument	Most details relevant and support writer's argument	Some details relevant and support writer's argument	Few details relevant and support writer's argument	
	Word Choice	All paragraphs contain a variety of well chosen words	Most paragraphs contain a variety of well chosen words	Some paragraphs contain a variety of well chosen words	Few paragraphs contain a variety of well chosen words	
	Logic Of Argument	All of the argument is reasoned with precision	Most of the argument is reasoned with precision	Some of the argument is reasoned with precision	Little of the argument is reasoned with precision	
	Accuracy of Information	All information is correctly reported	Most information is correctly reported	Some information is correctly reported	Little information is correctly reported	
M L A	MLA Formatting	All criteria are met	Most criteria are met	Some criteria are met	Few criteria are met	
	Quality Of Sources	All sources are credible	Most sources are credible	Some sources are credible	Few sources are credible	
						Total Pts. _____

APPENDIX H TEAGAN'S GRAPHIC ORGANIZER



APPENDIX I
TEAGAN'S INSPIRATION WRITING OUTLINE

The Catcher in the Rye - Hero's Journey

I. 1. Departure

A. Call to Adventure

1. Holden gets expelled from Pencey Prep.

"They kicked me out"(6).

B. Refusal of the Call

1. Holden seems to have a hard time saying goodbye to Pencey.

"When I leave a place I like to know I'm leaving it. If you don't you feel even worse" (7). This suggests that Holden is confused and regretting getting kicked out.

C. Supernatural Aid

1. Holden gets advice from his history teacher, Mr. Spencer.

"Life is a game, boy...that one plays according to the rules...Game, my ass" (12).

D. Crossing the First Threshold

1. Holden decides to run away to NYC.

"I put my red hunting hat on...then I yelled...'Sleep tight, ya morons!'...Then I got the hell out" (68).

E. Belly of the Whale

1. Holden falls down the steps.

"Some stupid guy had thrown peanut shells all over the stairs, and I damn near broke my crazy neck" (68).

II. 2. Initiation

A. The Road of Trials

1. Horwitz: Holden has a conversation with him about the fish and the ducks, but they are really talking about Holden.

"If you was a fish, Mother Nature'd take care of you, wouldn't she?" (109).

a. Maurice - beats Holden up, lies to him.

"Chief, you're gonna force me inna roughin' ya up a little bit. I don't wanna do it, but that's the way it looks,'...'You owe us five bucks'"(133).s

B. Meeting with the Goddess

1. Jane is the goddess because she is the perfect ideal for Holden, and they have a close past relationship.

"She was the only one, outside my family, that I ever showed Allie's baseball mitt to...you never worried with Jane...you were happy" (100-103).

C. The Temptation

1. Sunny - Holden does nothing with her - he succeeds in not giving in to temptation.

"Look...I'll pay you and all, but do you mind very much if we don't do it?...She was depressing. Her green dress hanging in the closet and all...I don't think I could ever do it with somebody that sits in a stupid movie all day long" (125).

D. Final Battle

III. 3. Return

A. The Return

B. The Magic Flight

C. The Rescue

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BIOGRAPHICAL SKETCH

Alexandra A. Lauterbach's scholarly interest centers on effective literacy instruction for elementary and secondary students with learning disabilities (LD), and effective professional development for teachers of students with LD. Specifically, she is interested in learning how the dimensions of teacher cognition influence teacher quality and the achievement of students with LD, particularly in the area of literacy. Additionally, her research emphasizes teacher education at the preservice and inservice levels, and focuses on how teacher educators can best prepare both high quality special educators and general educators able to deliver effective evidenced-based instruction.

Alexandra A. Lauterbach's professional experiences have reflected her interest in the professional preparation and training of preservice and inservice teachers. As research assistant on the Institute of Education Sciences (IES)-funded grant entitled The Influence of Collaborative Professional Development Groups and Coaching on the Literacy Instruction of Upper Elementary Special Education Teachers, she assisted with the development and implementation of a reading professional development (PD) package for special education teachers of upper elementary students with severe LD. She developed an observation tool, wrote a training protocol, and ran the fidelity training. She has also worked as a research assistant at the National Center to Inform Policy and Practice in Special Education Professional Development (NCIPP), an Office of Special Education Programs (OSEP)-funded center aiming to improve teacher quality. Her role was to evaluate a northeastern state department of education's mentoring and induction program, and to work with the State Department of Education, local education associations, and Institutes of Higher Education to improve training related to reading instruction. She was also involved with several grant-writing efforts.

With colleagues at UF, she wrote a proposal for an OSEP personnel preparation grant entitled Research on Quality in Educating Special Education Teachers, awarded in May 2009. She also assisted in the writing of a university grant, awarded in June of 2012, to improve knowledge of key variables that predict the response of students with LD to morphological awareness instruction.

Prior to beginning her doctoral study, Alexandra A. Lauterbach had many experiences in both public and private school education. Her early education included public school experience as a student in the Philadelphia School District, at both Samuel Powel Elementary School and Middle Years Alternative School. Additionally, she completed her student teaching at Independence Charter School and Sadie Tanner Mossell Alexander University of Pennsylvania Elementary School while attending the University of Pennsylvania's Teacher Education Program. Most of her classroom teaching experience focused on teaching language arts and social studies at both the intermediate and secondary levels to students with LD. During her last year of teaching, she provided reading instruction to students at the elementary, intermediate, and secondary levels at three private schools in the Philadelphia area. These experiences fostered her desire to improve the educational outcomes for students with LD and the preparedness of their teachers.