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The University of San Francisco

HIGH SCHOOL ENGLISH LANGUAGE ARTS TEACHERS' CONCEPTUALIZATIONS
OF PEDAGOGICAL CONTENT KNOWLEDGE

A Dissertation Presented to
the Faculty of the School of Education
Learning and Instruction Department

In Partial Fulfillment
of the Requirements
for the Degree Doctor of Education

by

Donna Hyatt Scarlett

San Francisco, CA

May 2009

This dissertation, written under the direction of the candidate's dissertation committee and approved by the members of the committee, has been presented to and accepted by the Faculty of the School of Education in partial fulfillment of the requirements for the degree of Doctor of Education. The content and research methodologies presented in this work represent the work of the candidate alone.

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TABLE OF CONTENTS

TABLE OF CONTENTS.....	i
LIST OF TABLES.....	iii
CHAPTER I: THE RESEARCH PROBLEM.....	1
Statement of the Problem.....	1
Best Educational Practices	1
High School English Language Arts.....	2
Today’s Learner.....	4
Background and Need.....	6
Knowledge of How to Teach a Subject/Curricular Organization.....	8
Student Learning Realities	12
Topic Relevance.....	14
Need for the Study.....	15
Purpose of Study.....	17
Cluster Three: Social	18
Theoretical Rationale.....	19
Subject Matter Knowledge.....	21
General Pedagogical Knowledge.....	22
Pedagogical Content Knowledge.....	22
English Language Arts Pedagogical Content Knowledge	26
Research Questions.....	26
Design Overview	27
Definition of Terms	27
CHAPTER II: REVIEW OF THE LITERATURE.....	30
Introduction.....	30
Pedagogical Content Knowledge.....	33
Knowledge of How to Teach a Subject/Curricular Organization.....	38
Student Learning Realities: Today’s Learner.....	55
Student Learning Realities: Teacher Perspectives.....	59
Topic Relevance.....	64
CHAPTER III: METHODOLOGY.....	68
Introduction.....	68
Research Questions.....	68
Population and Sample	70
Description of Study Participants.....	73
Protection of Human Subjects.....	76
Instrumentation.....	77
General Questions.....	78
English Language Arts Pedagogical Content Knowledge	78
Pilot Study.....	80
Qualifications of the Researcher	82

Validity and Limitations	84
CHAPTER IV: RESULTS.....	85
Overview of Findings	85
Summary of Findings.....	85
Research Question One.....	89
Making the Invisible Visible	91
Peer and Self Assessments	93
Examples	96
Physical Activities	101
Research Question Two	103
Personal Connections.....	105
Multiple Access Points.....	109
Real-Life Relevancy.....	119
Research Question Three	121
Unit and Lesson Plan Organization.....	122
Critical Thinking Skills.....	127
Research Question Four	130
Writing.....	131
Vocabulary.....	133
Reading.....	135
School Context.....	137
CHAPTER V: SUMMARY, CONCLUSIONS, LIMITATIONS, IMPLICATIONS, AND RECOMMENDATIONS FOR FUTURE RESEARCH	139
Summary of Study	139
Discussion of Findings.....	140
Research Question One	142
Research Question Two.....	144
Research Question Three.....	146
Research Question Four	148
Implications.....	150
Instructional Implications.....	150
Limitations	155
Recommendations for Future Research	156
Recommendations for Future Practice.....	157
Closing Remarks.....	158
REFERENCES.....	162
APPENDIX.....	170
Appendix A: Participant Consent Form.....	170
Appendix B: Interview Protocol.....	174
Appendix C: Interview Questions Alignment.....	177

LIST OF TABLES

Table	Title	Page
1	Integrative and Transformative Models of Teacher Cognition.....	36
2	Demographic Overview of Participants.....	72
3	Pedagogical Content Knowledge Themes.....	92
4	Pedagogical Content Knowledge of the Learner	105
5	Pedagogical Content Knowledge of Curricular Organization.....	123
6	Pedagogical Content Knowledge of Topic Relevance.....	131

CHAPTER I

THE RESEARCH PROBLEM

Statement of the Problem

The issues of subject matter and teaching practice are integral in addressing the national issue of school improvement. National reform efforts that extend beyond legislation such as *No Child Left Behind* (2001) have begun to address the essential issue of what and how teachers teach. These reform efforts have examined “best educational practices” as a starting point for clearly defining the “content of the curriculum and the classroom activities through which students may most effectively engage that content” (Zemelman, Daniels, & Hyde, 2005, p. viii). Recent empirical research (Zemelman, Daniels, & Hyde, 2005) has indicated that best practices occur in classrooms where teachers maximize learning opportunities for students by maintaining a curriculum focus on “challenging, authentic, and collaborative work” (p. viii).

Best Educational Practices

One approach to defining teacher quality has been through teaching methodology (Darling-Hammond, 1996). Numerous studies have explored teaching behaviors of more and less effective teachers and have linked specific teaching practices to increased student-learning outcomes (Block, Hurt, & Oakar, 2002; Flynn, 2007; Gersten, Baker, Haager, & Graves; 2005; Topping & Ferguson, 2005). These practices include exemplary teacher-student interaction, high-quality questioning, maximizing time on task, individual and whole-group instructional balance, modeling behaviors, coaching, scaffolding, and bringing together teachers’ understanding of students’ needs and interests as well as the social

dynamics of classroom interactions. While highly effective teachers are seen as having a wealth of content knowledge and knowledge of pedagogy (instructional strategies implementation), the relationship between content knowledge and pedagogy remains largely implicit (Fives & Buehl, 2008). Previous research suggests that teachers either have not had the opportunity to articulate this relationship or struggle to articulate this relationship explicitly.

It is also reasonable to believe that high-stakes testing accountability provides added pressures to teachers that make it even less likely that they articulate the relationships between their content knowledge, teaching and learning beliefs, understanding of teaching and learning theories, and subject-specific strategies for representing knowledge in ways that maximize student learning. Calling upon highly effective teachers to articulate these relationships explicitly is essential in developing a coherent teaching and learning framework that supports pre-service, novice, and experienced educators who may be struggling to represent this knowledge.

High School English Language Arts

Within the field of high school English language arts specifically, there is a need to understand what and how teachers teach by examining the explicit ways in which teachers support their students in developing critical thinking and learning tools so that students may become more critically literate (Wright, 2007). The National Council of Teachers of English (NCTE) defined highly effective English language arts teachers as those who contain a range of knowledge about the content and pedagogical practices required to support diverse students in reaching and extending beyond academic proficiency (NCTE, 2006). An increase in students' growing access to electronic media and other "new literacies" requires that

English teachers develop and implement content-specific instructional approaches that support their overall literacy development. Recently, the definition of literacy has expanded to include “an individual’s ability to read, write, and speak in English and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one’s goals, and to develop one’s knowledge and potential” (The National Literacy Act, 1991, p. 2). This expanded definition has implications for teacher training, the development of novice teachers, and the development of teacher expertise.

Secondary English language arts teachers require specialized pedagogical content knowledge in order to support this expanded conceptualization of literacy development (Dudley-Marling, Abt-Perkins, Sato, & Selfe, 2006; NCTE, 2006). Secondary English language arts teachers, however, tend to focus more on content rather than specific strategies for implementing subject-specific practice (Wright, 2007). Despite this content-heavy focus, highly effective English language arts teachers do share some common perspectives about teaching and learning (NCTE, 2006). One of these common views is that students develop language competencies by engaging in authentic and meaningful activities. Examples of these activities include engaging in classroom activities that involve reading and viewing texts, writing and creating visual images, and participating in listening and speaking activities in and beyond the context of the classroom (NCTE, 2006). Furthermore, English language arts teachers themselves agree that pedagogical content knowledge is an essential knowledge base for highly effective teachers (Dudley-Marling, Abt-Perkins, Sato, and Selfe, 2006).

There is little empirical research of teachers’ perspectives regarding the pedagogical content knowledge teachers need to teach secondary English language arts effectively. There are a few possible explanations for this. Unlike science and mathematics, English language

arts is more broadly defined as a discipline, and the content that is taught at the secondary level varies across schools, districts, and states. It is also generally assumed that English language arts teachers are competent readers and writers (Phelps & Schilling, 2004).

Research has largely left unexplored the ways in which experienced teachers develop and represent this content knowledge. Furthermore, the research literature has recently begun to include new literacies, such as electronic media, in its definition of English teachers' needed content knowledge. Finally, emerging research in reading has indicated that teachers need specific content knowledge that extends across multiple domains in order to teach effectively (Phelps & Schilling, 2004), such as knowledge of antonyms and prefixes, interpreting student reading to assess comprehension, and teaching students how to use correct word substitutions. Research has indicated that pre-service teachers enter teacher education programs with weak pedagogical content knowledge (Ben-Chaim, Keret, & Ilany, 2007; Gatbonton, 2008; Kleinfield, 1992; Linek, Nelson, Sampson, Zeek, Mohr, & Hughes, 1999; Mosely, Ramsey, & Ruff, 2004; Shea & Greenwood, 2006, 2007; Swars, Hart, Smith, Smith, & Tolar, 2007). Articulating the relationship between content and pedagogy within individual subject areas is essential to improving the practice of a majority of pre-service, novice, and experienced teachers who either (a) lack this knowledge, (b) spend years attempting to develop a level of expertise without a framework, or (c) leave the profession entirely despite their potential to develop this expertise.

Today's Learner

An integral aspect of understanding what and how teachers teach is its relevance to student learning. The advent of technological advances (computers, the Internet, cell phones, digital/downloadable music) over the past three decades has contributed to the creation of a

new generation of learners. According to Tapscott (2009), The first generation of these learners, the “Net Generation” (also called Millennials or Generation Y), were born between January 1977 and December 1997. The second generation of these learners, “Generation Next” (also called Generation Z) were born between January 1998 to the present. These two generations of learners are considered to be the most “technically literate, educated, and ethnically diverse generation in history” (Eisner, 2005, p. 4). These learners have been exposed to a wide range of choice, abundance, and control over the things they want as well as ways to obtain it (Sweeney, 2006). In regard to education, these two generations are described as experiential learners who prefer to learn via hands-on, active learning opportunities. Thus, they learn by doing and are accustomed to experiential learning processes such as games, case studies, hands-on activities, and simulations that capture and hold their interest (Sweeney, 2006). These students also are used to receiving immediate and ongoing feedback regarding their academic progress. Many of these learners are not achieving their academic potential, as reflected by an almost 50% dropout rate for those who enroll in college, or arrive at college without the skills they need to achieve academic success (Tapscott, 2009).

The more traditional, lecture-style model of teaching that has generally prevailed in our nation’s schools has been referred to as a “transmission approach,” where the teacher is considered the expert. In this teaching model, the teacher is the “pourer-in” of knowledge, where “experts ‘tell’ students what they need to know” (Cambron-McCabe & Dutton, 2000, p. 206). Today’s learners, in contrast, require a “generative” approach. A generative model of teaching and learning focuses on a learner-centered approach to education that includes the learner as an active participant in the construction of knowledge. Generative pedagogy values

both content and process through active engagement in which the learner participates in collaborative learning, cooperative learning, exploration, inquiry-based learning, and discovery (Cambron-McCabe & Dutton, 2000; Tapscott, 2009). As today's students enter the workplace, they will require a variety of knowledge and skills, and it is vital for less effective teachers to understand and be able to represent their content knowledge in a way that is accessible to this increasingly diverse student population.

Background and Need

Highly effective teachers demonstrate a wealth of content knowledge, as well as knowledge of pedagogy, the “processes, contexts, and theories that influence teaching practice” (Fives & Buehl, 2008, p. 135). However, the relationship between content knowledge and pedagogy remains largely implicit (Fives & Buehl, 2008). Over the past few decades, much research has focused on teachers' perspectives in an attempt to understand teaching thought processes and instructional practices and how to make them explicit (Clark & Peterson, 1986; Fang, 1996).

Many research studies have examined teachers' development of the implementation of subject-specific representations of knowledge in ways that maximize student learning. As teachers construct professional knowledge, they develop a foundation for the ways in which they think about and implement subject-specific instruction (Kagan, 1992). This foundation is influenced by knowledge of content (subject-specific subject matter), context (teaching in relation to school context, diverse student learning populations), and individual person (teacher beliefs) (Grossman, 1989; Kagan, 1992; Speer, 2008; Shulman, 1986, 1987). This professional knowledge foundation has been identified in the research literature as an essential component in the process of learning how to teach (Connelly & Clandinin,

1994).

Currently, research urgently calls for examining the relationship between content knowledge (understanding of a subject/discipline) and pedagogical knowledge (the ways in which teachers conceptualize and approach both content and pedagogy in relation to their subject-specific practice). One approach to exploring this relationship further is by examining teachers' thought processes of pedagogical content knowledge to analyze the "specific types of teacher thinking and the factors that influence the transfer of that subject matter knowledge to inform what teachers need in their pre-service and professional development" (Eberle, 2008, p. 104). Pedagogical content knowledge can be defined as the intersection of two knowledge domains: subject matter knowledge and general pedagogical knowledge. Subject matter knowledge includes knowledge of subject-specific content, other content beyond the subject being taught, and curricular knowledge. General pedagogical knowledge is comprised of knowledge of learners, theories of teaching and learning techniques and principles, and theories of classroom behavior and management techniques and principles.

The remainder of this section of Chapter I provides a general overview of the research for the following four aspects of pedagogical content knowledge: (1) understanding of how to teach a subject, (2) curricular organization within a subject area, (3) student learning realities (specific learning challenges within a subject area, students' developmental capabilities, and common misconceptions of learning certain topics within a subject area), and (4) knowledge of relevance of topics to include in the curriculum. It is important to note that much overlap exists between these four aspects of pedagogical content knowledge in the research literature. For this reason, the research overview for (1) understanding of how to teach a subject and (2) curricular organization within a subject area have been combined into

one overview. Additionally, each of the following four sections may refer to more than one element of pedagogical content knowledge rather than only its specific heading. Finally, this section includes a brief summary of the research on pedagogical content knowledge perspectives for secondary English language arts and the need for additional research. This research literature will be explored more extensively in Chapter 2.

Knowledge of How to Teach a Subject/Curricular Organization

Shulman, Wilson, and Richert (1987) described the need for teachers to understand how to teach a subject in ways that would maximize student learning. They described curricular organization as a teacher's understanding of the various ways in which to organize the teaching of a discipline. An example of this in high school English language arts would be organizing personal narratives). Reading, writing, listening and speaking activities might then be organized specifically around these types of texts.

Research has indicated that teachers need specific content knowledge to effectively teach within a specific subject area, and that aligning teachers' beliefs with current educational reforms (best practices) requires careful examination of teaching, as well as thoughtful reflection (Swars, Hart, Smith, Smith, & Tolar, 2007). Much of the current research on subject-specific teacher beliefs of effective teaching and learning includes only broad generalizations of teacher beliefs and practices (Aguirre, 2002; Speer, 2008). An example of this type of generalization is "learner-centered" teaching and learning beliefs. Though a teacher may hold such beliefs, a broad generalization does not provide detail about which specific practices the teacher believes should be used to create a classroom environment that positively impacts student learning within a specific discipline (Speer, 2008). Perceptions of generalized content-specific teaching practices include implementation

of differentiated instructional approaches that support student learning, generalizations regarding how teachers contextualize their instruction to the topic and individual student, and concern with creating and implementing scaffolded learning opportunities that provide students with learning opportunities that connect to a specific learning outcome, as well as build on previous knowledge (Bell, 2007).

Other empirical studies have pointed to generalized relationships between teacher knowledge and teachers' pedagogical content approaches as teachers implement instruction (Blanton & Moorman, 1985). Research on teacher conceptions has suggested that current research findings of relationships between teacher thinking and implementation of practice have centered around teacher conceptions of teaching and learning that were generalized, in which participants responded to such questions as "What is the teacher's role? What is regarded as good teaching? and Does teaching influence student learning?" (Eley, 2006, p. 191).

One example of a research effort that attempted to examine specific teaching practices was sponsored by the national educational research organization WestEd, which explored ways of making secondary reading instruction explicit to support teachers in constructing knowledge and expertise as they implemented quality reading practices that supported increased student learning outcomes. Another example was research that focused on videotaped lesson data as a means of analyzing teachers' views of themselves teaching in order to explain their instructional decisions (McNair, 1978). Other research has attempted to analyze data to gauge alignment between teachers' professional development experiences and teachers' perspectives of what their classrooms should look like in regard to teaching and learning (Brighton, 2003). Subject-specific research of pedagogical content knowledge

perspectives within high school English language arts, however, has focused mostly on teachers' general theoretical beliefs about their subject matter and potential influences these beliefs have on their instructional practice (Agee, 1998; McDiarmid & Ball, 1989; Muchmore, 2001).

Research has indicated that teachers' beliefs influence the instructional decisions teachers make throughout their professional careers (Ball, Lubenski, & Mewborn, 2001, 2004, Koca & Sen, 2006; Pajares, 1992), and thus substantially impact what they teach as well as how and why they teach certain subject-specific course content (Buchmann, 1986). Few studies, however, have explored teacher beliefs as they relate to precise practices within a particular academic discipline. There is a need to understand how teachers re-adjust subject-specific thinking and future practice as a result of reflecting upon teaching experiences and the implementation and effectiveness of particular strategies (Eley, 2006). Specific examination of teachers' thinking in relation to these factors is essential to teachers' development and implementation of connected and coherent subject-specific curriculum (Eberle, 2008).

Research also has suggested that teachers' beliefs about teaching are largely constructed from their own experiences as students, student teachers, and lifetime experiences as learners, and thus influence how they interpret material being learned in their teacher education programs and how they execute their instruction in their student teaching experiences (Hall, 2004; Lortie, 1975). Research that has examined pre-service teachers' construction of pedagogical content knowledge beliefs has indicated a shift in pre-service teachers' beliefs, course-specific learning, and individual teaching experiences (Asselin, 2000; Chaim, Keret, & Ilany, 2007; Kleinfield, 1992; Massengil-Shaw, Dvorak, & Bates,

2007; Mosely, Ramsey, & Ruff, 2004; Swars, Hart, Smith, Smith, & Tolar, 2007) over the course of a semester or year of classroom learning and pre-service teaching experiences.

Authentic instructional activities in teacher preparation programs have helped pre-service teachers identify and examine their instructional beliefs and support them in integrating subject-specific theory and practice during their pre-service experiences (Asselin, 2000; Massengill-Shaw, Dvorak, & Bates, 2007). Other research has indicated that pre-service teachers' generalized perceptions of "good" secondary mathematics and physics teaching shifts from primarily content knowledge to pedagogical knowledge during their in-service student teaching experiences (Koca & Sen, 2008). Examination of pre-service mathematics teachers' pedagogical content beliefs over the course of two methods classes over two semesters indicated that pre-service teachers shifted from more traditional pedagogical beliefs about teaching and learning mathematics to those that aligned with current educational reforms, which in this case was a constructivist approach to teaching and learning (Swars, Swars, Hart & Smith, 2007).

Research findings also have suggested that teachers may alter their pedagogical beliefs as a result of learning and professional development experiences (Speer, 2008). One example of this was a study conducted by the National Research Center on the Gifted and Talented at the University of Virginia (Brighton, 2003), which pointed out a gap between teachers' perceptions of classroom practice and actual practices implemented by teachers.

This section has provided a general overview of the research literature of teachers' pedagogical content knowledge perspectives of knowledge of how to teach a subject, as well as knowledge of curricular organization. This research will be described in more detail in Chapter II.

Student Learning Realities

Another aspect of pedagogical content knowledge is a teacher's understanding of the realities of student learning. This may include knowledge of students' specific learning challenges within a subject area, students' developmental capabilities, and common misconceptions of learning certain topics within a subject area (Wilson, Shulman, & Richert, 1987). This aspect of pedagogical content knowledge plays an essential role for today's teacher due to the advent of technological advances over the past three decades that has contributed to the creation of new generations of learners (Tapscott, 2009).

As teachers gain professional experience, they shift their knowledge and instructional perceptions in ways that support student learning (Asselin, 2000; Chaim, Keret, & Ilany, 2007; Kleinfield, 1992; Massengil-Shaw, Dvorak, & Bates, 2007; Mosely, Ramsey, & Ruff, 2004; Swars, Hart, Smith, Smith, & Tolar, 2007). Knowledge development shifts have included such prevalent themes as increasing metacognition in knowledge and teaching beliefs, re-conceptualizing teaching beliefs based on real exposure to the nature of students' learning realities and needs, transitioning from self concern to concern of students, formulating and implementing instructional and management routines, and increasing capability in context-specific thinking and problem solving (Dershimer & Kent, 1999; Kagan, 1992).

Research within mathematics and writing has examined how novice teachers have combined their understanding of the subject matter with aspects of learning, contextual teaching realities, and knowledge of their students as learners from the time of teachers' pre-service program experiences to the end of their first year of teaching. Additionally, case study research that has gauged pre-service literacy teachers' beliefs about literacy and

teaching has indicated that as teachers participate in semester-long literacy methods courses, their perceptions of literacy development acquisition shift from that of a teacher-centered, factual informational approach to a student-centered one focused on acquisition of literacy processes and strategies (Linek et al., 1999).

Research focused on how practicing teachers construct pedagogical content knowledge instructional approaches in relation to understanding of students as learners has included subject-specific life history case studies (Muchmore, 2001) and the influences of contextual factors, such as teachers, parents and learning experiences on teachers' instructional beliefs. In the area of literacy in particular, research has suggested that literacy beliefs are rooted strongly in implicit personal life experiences (the belief of reading and writing as self-discovery), the teacher's own experiences in interacting with students, and the teacher's perceptions of the various ways in which students learn (Muchmore, 2001).

Other research has examined pedagogical content knowledge in terms of teachers' perceptions of assessments to gauge the effectiveness of their instruction as it relates to student learning (Agee, 1998). This research focus included the examination of general literature teaching and learning goals, personal histories of teachers, and consideration of students as learners. The data analyzed broad questions, such as what teachers perceived as examples of the most effective strategies they used to approach teaching within some aspect of their subject area, such as the teaching of literature, or how they decided generally when a lesson was effective. Other assessment research has considered how assessment has guided teachers' instructional decisions by examining teachers' daily and long-term assessments, yet has not explored teachers' thinking around subject-specific teaching and learning goals as it relates to different groups of students and the possible influences this might have on

constructing instructional decisions (Brickhouse, 1993).

This section has provided a general overview of the research literature of teachers' pedagogical content knowledge perspectives of student learning realities. This research will be described in more detail in Chapter II.

Topic Relevance

According to Shulman (1986), topic relevance is the teacher's ability not only to understand a specific topic within a discipline but also to understand which topics are essential to include in his or her instruction as well as which topics can be considered peripheral. Massengill-Shaw, Dvorak, and Bates (2007) explored perceptions of pre-service teachers of literacy pedagogical content knowledge regarding their literacy beliefs about reading instruction. These pre-service teachers' beliefs of pedagogical content knowledge included information that focused on aspects of topic relevancy, such as phonics, comprehension, fluency, strategies, sight words, text, and reading difficulties beliefs. Findings of this study suggested a substantial shift in teachers' beliefs about specific relevancy of these aspects of literacy instruction.

As part of a larger federally funded study from the National Research Center on English Learning & Achievement (CELA), Ostrowski (2000) observed and analyzed the practice of four exemplary middle and high school teachers. Relevance included the articulation of thoughts and ideas as they related to the topic, activities that related not only to English language arts but also to other disciplines, as well as to the broader context of society, and accomplishment of meaningful tasks. English language arts researcher Judith Langer (2001) further described topic relevance in what she termed to be "high literacy".

High literacy is an instruction that includes a teacher's ability to align particular language, content, and reasoning to specific situations and disciplines (Langer, 2001).

Other research has suggested that as teachers engage in actual field experiences and reflection sessions, they are “clarifying, confronting, and expanding [their] ideas, beliefs and values about science teaching and learning as well as expanding [their] ideas, beliefs and values about teaching” (Mosely, Ramsey, & Ruff, 2004, p. 11). Additionally, as teachers engage in authentic proportional reasoning tasks that include both theory and application to practice, they increase their pedagogical content knowledge of specific topics within a discipline, such as topics and ratios in mathematics, for example (Ben-Chaim, Keret, & Ilany, 2007).

This section has provided a general overview of the research literature of teachers' pedagogical content knowledge perspectives of knowledge of topic relevance. This research will be described in more detail in Chapter II.

Need for the Study

Of the few studies that have explored high school English language arts teachers' pedagogical content knowledge, most focused on case study approaches that examined pedagogical content knowledge through observations, videotaped teaching sessions, and interviews with only a few teachers, which is a limitation to the generalization of research findings (Gatbonton, 1999, 2008; Gudnundsdottir, 1991; Langer, 2001; Ostrowski, 2000). While two studies included larger participant groups to examine English language arts teachers' pedagogical content knowledge (Agee, 1998; Richards, 2001), data for each study were limited to one subcategory of English language arts instruction. One study focused on reading and the other focused on literature.

Currently, no secondary English language arts pedagogical content knowledge model exists. One way to construct such a model is by focusing on the thinking and practice of experienced high school English language arts teachers who are considered to be highly effective educators. For the purposes of this study, highly effective teachers were defined as those teachers who maximize student learning opportunities by implementing “challenging, authentic, and collaborative work” (Zemelman, Daniels, & Hyde, 2005, p. viii). This study addressed the limitations of previous research and will contribute to the emerging secondary English language arts pedagogical content knowledge research base by (1) examining 12 secondary English language arts teachers’ constructions of pedagogical content knowledge within a framework of educational best practices as identified by empirical research, (2) examining perspectives beyond just a few case studies to explore possible common pedagogical content knowledge themes that may be generalized to a larger audience, (3) contributing to the construction of a secondary English language arts pedagogical content model by examining the thinking and practice of experienced English language arts educators who been identified as highly effective teachers, and (4) examining how new literacies (texts that extend beyond traditional reading and writing) may fit into a pedagogical content knowledge framework.

Articulating the relationship between content and pedagogy within individual subject areas is essential to improving the practice of a majority of pre-service, novice, and experienced teachers who either (a) lack this knowledge, (b) spend years attempting to develop a level of expertise without a framework, or (c) leave the profession entirely despite their potential to develop this expertise. Identifying the key elements of pedagogical content knowledge explicitly within an individual subject area may help these teachers move from a

novice to expert stance more quickly, and also may provide them with needed guidance to develop this knowledge in order to experience greater levels of success at earlier stages in their teaching careers. Examining the pedagogical content knowledge of experienced, exemplary teachers contributes to identifying and making explicit those best English language arts practices that support student learning.

Purpose of Study

The purpose of this study was to examine the ways in which experienced secondary English language arts teachers articulate their pedagogical content knowledge. Articulation of pedagogical content knowledge was examined in four ways: (1) how to teach a subject a subject area in ways that maximize student learning, (2) knowledge of learners, (3) curricular organization, and (4) most relevant topics to include in the curriculum. For the purposes of this study, exemplary teachers were defined as those teachers who maximize student learning opportunities by implementing the best practices identified by Zemelman, Daniels, and Hyde (2005) that include “challenging, authentic, and collaborative work” (p. viii).

What Constitutes a Highly Effective Teacher

In a comprehensive synthesis of empirical research from professional organizations, research centers, and American education subject-matter groups on teaching and learning, Zemelman, Daniels and Hyde (2005) identified 13 characteristics of highly effective teaching and learning practices. These 13 characteristics are teaching and learning practices that are (1) student-centered (2) experiential, (3) holistic, (4) authentic, (5) challenging, (6) cognitive, (7) developmental, (8) constructivist, (9) expressive, (10) reflective, (11) social, (12) collaborative, and (13) democratic. The researchers organized these 13 characteristics into three specific clusters, which are listed and described below.

Cluster One: Student-Centered

1. Student-centered: the investigation of students' own questions and interests
2. Experiential: active, hands-on learning experiences
3. Holistic: examining whole ideas, events, and materials in meaningful contexts rather than in isolation of one another
4. Authentic: materials that are real, rich, and complex versus those that are oversimplified, controlling, or "watered down"
5. Challenging: opportunities for students to engage in real challenges, choices, and responsibility for their learning

Cluster Two: Cognitive

6. Cognitive: the development of conceptual understanding through inquiry and self-monitoring of students' thinking
7. Developmental: activities that align to the developmental levels of students
8. Constructivist: interactive process of recreating and reinventing content learned (language, literacy, mathematics)
9. Expressive: use of a range of communicative media, such as speech, writing, drawing, poetry, dance, drama, music, movement, and visual arts, to support student construction of meaning
10. Reflective: opportunities for students to reflect, debrief, and articulate what they feel, think, and learn

Cluster Three: Social

11. Social: interactive, social learning opportunities that are collaborative and democratic

12. Collaborative: cooperative learning activities that align with social power of learning rather than individualistic, competitive approaches
13. Democratic: students' learning connected to their actual classroom and school communities

It is always difficult to have experts consciously articulate what they do in any discussion. This seems to be true with teachers. One way to facilitate this conscious articulation is to use a series of questions that will facilitate their remembering and bringing into consciousness what they do. The Zemelman, Daniels and Hyde (2005) proposal of 13 characteristics of best teaching practices may be the most helpful framework to date of the key characteristics of highly effective teaching and learning. These characteristics also seem to be particularly well suited to an expanded notion of literacy that includes reading, writing, speaking, computing and solving problems proficiently, and instruction beyond hard texts, such as digital media and computer-based instruction that contribute to developing a student's knowledge and potential. In fact, these 13 characteristics are so useful that they offer the potential to serve as exemplary interview prompts to help expert teachers reflect and communicate more effectively about their own teaching practices. This study, therefore, utilized these 13 characteristics as a basis for interview probes.

Theoretical Rationale

The theoretical rationale for this study is based on Shulman's (1986, 1987) construct of pedagogical content knowledge (Figure 1). Pedagogical content knowledge can be defined as the intersection of two knowledge domains: subject matter knowledge and general pedagogical knowledge. Subject matter knowledge includes knowledge of subject-specific content, other content beyond the subject being taught, and curricular knowledge. General

pedagogical knowledge is comprised of knowledge of learners, theories of teaching and learning techniques and principles, and theories of classroom behavior and management techniques and principles.

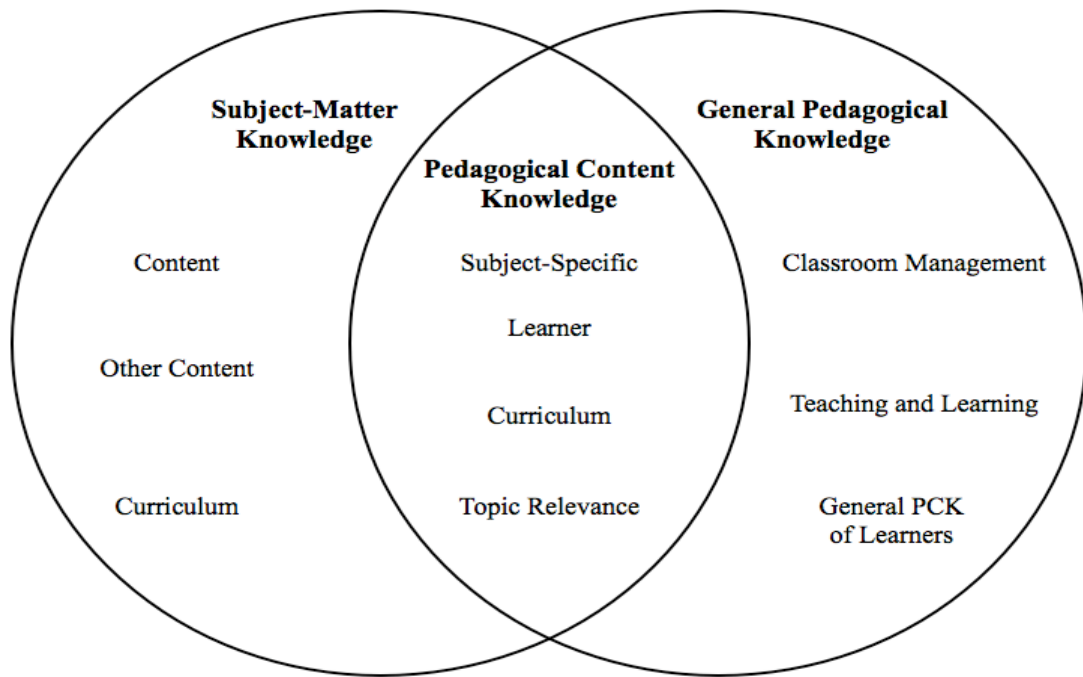


Figure 1. Elements of subject matter, general pedagogical knowledge, and pedagogical content knowledge.

Wilson, Shulman, and Richert (1987) identified pedagogical content knowledge as one aspect of teacher knowledge essential to highly effective teacher practice. The additional aspects of essential teacher knowledge identified by the researchers can be sub-categorized as components of subject matter knowledge and general pedagogical knowledge, as shown in Figure 1. In this figure, elements of subject matter knowledge include knowledge of content and curricular knowledge. General pedagogical knowledge includes knowledge of classroom management theories, teaching and learning theories, and learning. Pedagogical content

knowledge elements include knowledge of context, curriculum, the learner, and subject-specific pedagogy. Research has suggested that pedagogical content knowledge, a teacher's "understanding of what it means to teach a particular topic as well as knowledge of the principles and techniques required to do so" (Shulman, 1986, p. 118), has the greatest impact on teachers' actions (Gess-Newsome, 2002; Grossman, 1989).

Subject Matter Knowledge

Subject matter knowledge includes knowledge of subject-specific content, other content beyond the subject being taught, and curricular knowledge. Content knowledge is defined as the deep understanding of subject matter. According to Shulman (1987), content knowledge is comprised of a collection of the literature and studies of a specific discipline, as well the nature of specific knowledge within a subject area. Shulman illustrated this through the example of the English teacher:

For example, the teacher of English should know English and American prose and poetry, written and spoken language use and comprehension, and grammar. In addition, he or she should be familiar with the critical literature that applies to particular novels or epics that are under discussion in class. Moreover, the teacher should understand alternative theories of interpretation and criticism, and how these might relate to issues of curriculum and of teaching. (p. 10)

As part of his definition of subject matter knowledge, Shulman (1986) also included the need for the teacher to be familiar with the content students were studying in other disciplines. He suggested that this familiarity would help the teacher to make meaningful and relevant connections to what students were learning in other classes. Curricular knowledge is the knowledge of the multiple access points to student inquiry, such as the various instructional resources and teaching materials available within a certain subject area.

General Pedagogical Knowledge

General pedagogical knowledge is comprised of an understanding of the theories of classroom behavior and management techniques and principles, theories of teaching and learning techniques and principles, and learners (1986, 1987). General pedagogical knowledge extends across all subject area domains and includes knowledge such as an understanding of organizing subject matter and an understanding of general teaching strategies. Teachers with general pedagogical knowledge understand the actual practices and methodologies associated with the act of teaching. Additionally, they understand this within the larger framework of the aims and purposes of teaching and learning.

Shulman (1987) defined general pedagogical knowledge as the “broad principles and strategies of classroom management and organization that appear to transcend subject matter” (p. 8). For example, a teacher who understands classroom behavior and management techniques and principles would set expectations for student behavior and communicate those expectations often and explicitly. An example of a teaching and learning technique or principal example would be for a teacher to utilize a re-directing strategy when students are off task to support them in focusing on an assigned classroom task or activity. An example of understanding learners would be to treat all students equitably while acknowledging individual learning differences and abilities of students. A teacher who understands learners would then adjust his or her practice to meet the needs of students based on their individual skills, abilities, interests, and knowledge.

Pedagogical Content Knowledge

Pedagogical content knowledge consists of the ways in which teachers approach both content and pedagogy in relation to their subject-specific practice. Pedagogical content

knowledge is reflected in how teachers implement subject-specific representations of knowledge in ways that maximize student learning. In Figure 1, pedagogical content knowledge includes an understanding of how to teach a subject, knowledge of the realities of student learning (specific learning challenges within a subject area, students' developmental capabilities, and common misconceptions of learning certain topics within a subject area), curricular organization within a subject area, and knowledge of relevance of topics to include in the curriculum (Wilson, Shulman, & Richert, 1987).

Historically, teacher quality has been measured primarily through the lens of content, such as teacher content examinations (Darling-Hammond, 1996, 2002; Shulman, 1986) or general pedagogical approaches to instruction (Shulman, 1986), one usually in isolation of the other. Content knowledge refers to the what of teaching within a teacher's individual subject area or discipline, while pedagogical knowledge refers to the how of teaching. Content knowledge consists of the ways in which a teacher organizes instruction and manages his or her classroom. Shulman described pedagogical content knowledge as the intersection within a subject area of this what and how. According to Shulman, pedagogical content knowledge consisted of the "most useful forms of representation of those ideas, the most powerful analogies, illustrations, examples, explanations, and demonstrations" (p. 9). He also included in his definition the need for teachers to consider pedagogical content knowledge approaches and content representations that considered the diverse learning needs of each individual student.

Subsequent research has presented extended conceptualizations of pedagogical content knowledge. Gess-Newsome (2002) pointed out that relatively few studies identified specific components of pedagogical content knowledge. Gess-Newsome conceptualized

pedagogical content knowledge in two ways: (1) an integrative model and (2) a transformative model. Gess-Newsome's integrative and transformative pedagogical content knowledge models attempted to make more explicit the "fuzzy boundaries" (p. 10) of pedagogical content knowledge. The integrative model refers to the absence of pedagogical content knowledge and thus describes teacher knowledge as the integration of knowledge of the separate domains of context, pedagogy, and subject matter. The transformative model is at the other end of the spectrum as the "synthesis of all knowledge needed in order to be a highly effective teacher" (p. 11).

All of these expanded conceptualizations of pedagogical content knowledge use Shulman's (1986) construct as a foundational component. For the purposes of this study, pedagogical content knowledge will be defined according to Wilson, Shulman, and Richert's (1987) construct of pedagogical content knowledge. This study will use their lens to explore secondary English language arts teachers' specific pedagogical beliefs and instructional approaches to teaching secondary English language arts to represent content in ways that support student learning.

As this study included secondary English language arts teachers as its participant pool, it is important to understand Shulman's (1986) construct of pedagogical content knowledge in terms of the high school English language arts teacher. Included here is one specific example of Shulman's model as applied to the secondary English language arts teacher. Shakespeare's play, *Romeo and Juliet*, is a text that many high schools include in their secondary English language arts curriculum. In considering the specific example of teaching the prologue to *Romeo and Juliet*, a teacher's subject matter knowledge includes knowing and understanding that the prologue is a sonnet. The teacher also will need to understand the

structure of a sonnet. Additionally, the teacher would need to know that the prologue of *Romeo and Juliet* provides a plot overview of the entire story.

The teacher would also need general pedagogical knowledge. One example of general pedagogical knowledge would be knowledge of a reform-oriented teaching practice. One reform-oriented teaching practice is collaborative, or cooperative, group learning (Zemelman, Daniels, & Hyde, 2005). A teacher might implement a jigsaw activity, for example, as a cooperative group learning strategy. In this example, students might have a copy of the prologue cut up into strips. Working in groups, the students would then have to attempt to arrange the lines of the prologue in a logical sequence. Each student group might then present prologue examples to the class and compare responses with those of other groups.

The teacher would also need pedagogical content knowledge to teach the prologue. He or she would need to understand various ways of representing the content in a way that students would understand it. Using the jigsaw activity example, the teacher might implement the jigsaw activity not just to actively engage students as a general pedagogical strategy, but also to assess students' prior knowledge of both poetry and students' ability to use contextual clues. Another example of pedagogical content knowledge would be the teacher's knowledge and approach to teaching iambic pentameter, as all of Shakespeare's sonnets are written using this structure. The teacher would need to understand how to represent five iambs within a verse in a way that students could understand it. One way this has been represented to students is by having 10 students line up holding a sign that either says ta or tum. The students then would say the sound ta or tum. The tum students would also represent the stress by stamping one foot as they recite the word tum. The teacher would then talk about the tat tum rhythm as a heartbeat, and would explain to students that Shakespeare

uses iambic pentameter to represent emotion.

English Language Arts Pedagogical Content Knowledge

Currently, there is very little research that investigates how experienced secondary English language arts teachers articulate pedagogical content knowledge. The studies that do exist have focused on case study approaches that have examined pedagogical content knowledge through observations, videotaped teaching sessions, and interviews with only a few teachers, which is a limitation to the generalization of research findings (Gatbonton, 1999, 2008; Grossman, 1989; Gudnundsdottir, 1991; Kleinfield, 1992; Langer, 1999, 2001; Ostrowski, 2001). To-date, no research appears to have examined multiple teacher perspectives of secondary English language arts pedagogical content knowledge. Examining multiple teacher perspectives is essential to determine potential patterns and themes that may exist in how secondary English language arts teachers articulate pedagogical content knowledge. One aim of this study, therefore, was to construct an initial understanding of a possible pedagogical content knowledge model for high school English language arts teaching. One way to construct such a model was by focusing on the thinking and practice of experienced high school English language arts teachers who were considered to be exemplary educators. Examining the pedagogical content knowledge of experienced, exemplary teachers contributed to identifying and making explicit those best English language arts practices that best support student learning.

Research Questions

1. In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of how to teach the subject of English language arts in ways that maximize student learning?

2. In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of learners?
3. In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of curricular organization?
4. In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of which topics are most relevant to include in the curriculum?

Design Overview

This study attempted to understand secondary English language arts teachers' pedagogical content knowledge through a set of standardized, open-ended interview questions that were conducted with 12 study participants. A standardized open-ended interview protocol is defined as an interview protocol that requires the interviewer to adhere to a specific script. Candidates selected to participate in this study included experienced secondary English language arts teachers who live and teach in the California Bay Area. For the purposes of this study, experienced secondary English language arts teachers were defined as teachers of grades 9-12. The researcher conducted a one-hour interview with each study participant. Interviews took place either before, during, or after school hours at the interviewee's workplace or at another specified place of the interviewee's choice.

Definition of Terms

Beginning Teacher Support and Assessment Program (BTSA)

A two-year, California state-funded teacher induction program that supports the professional development of beginning teachers who have recently earned their California Preliminary teaching credentials

English Language Arts

Instruction that includes literature, reading,

writing, and listening and speaking skills (California English Language Arts Content Standards and Frameworks, 1999).

Highly Effective Teacher

A teacher who maximizes student learning opportunities by implementing “challenging, authentic, and collaborative work” (Zemelman, Daniels, & Hyde, 2005, p. viii) by incorporating the 13 characteristics identified by Zemelman, Daniels and Hyde as effective teaching and learning practices. These 13 characteristics are teaching and learning practices that are (1) student-centered (2) experiential, (3) holistic, (4) authentic, (5) challenging, (6) cognitive, (7) developmental, (8) constructivist, (9) expressive, (10) reflective, (11) social, (12) collaborative, and (13) democratic.

General Pedagogical Content Knowledge

An understanding of the theories of classroom behavior and management techniques and principles, theories of teaching and learning techniques and principles, and learners. General pedagogical knowledge extends across all subject area domains and includes knowledge, such as an understanding of organizing subject matter and an understanding of general teaching strategies. Teachers with general pedagogical knowledge understand the actual practices and methodologies associated with the act of teaching. Additionally, they understand this within the larger framework of the aims and purposes of teaching and learning (Shulman, 1986, 1987).

Highly-Qualified Teacher

Teachers who meet the minimum qualifications of having a bachelor’s degree, state certification, and demonstrated subject-area competence for each subject they teach, as defined by the No Child Left Behind (NCLB) Act.

Literacy

The ability to read, write and use language effectively (Collins Essential English Dictionary, 2006).

New Literacies

Alternative texts that extend beyond the

traditional text-based forms of reading and writing, such as digital media (Yeo, 2007).

Pedagogical Content Knowledge

Formulation and representation of the subject-specific ideas, explanations, demonstrations, illustration, examples, and analogies that render these subjects comprehensible to others (Shulman, 1986).

Subject-Matter Knowledge

Knowledge of subject-specific content, other content beyond the subject being taught, and curricular knowledge. Content knowledge is defined as the deep understanding of subject matter. According to Shulman (1987), content knowledge is comprised of a collection of literature and studies as well the nature of specific knowledge within a subject area.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Articulating the relationship between content and pedagogy within individual subject areas is essential to improving the practice of a majority of pre-service, novice, and experienced teachers who either (a) lack this knowledge, (b) spend years attempting to develop a level of expertise without a framework, or (c) leave the profession entirely despite their potential to develop this expertise. Identifying the key elements of pedagogical content knowledge explicitly within an individual subject area may help these teachers move from a novice to expert stance more quickly, and also may provide them with needed guidance to develop this knowledge in order to experience greater levels of success at earlier stages in their teaching careers. Examining the pedagogical content knowledge of experienced, exemplary teachers contributes to identifying and making explicit those best English language arts practices that support student learning. The purpose of this study was to examine the ways in which experienced secondary English language arts teachers articulate their pedagogical content knowledge.

This chapter reviews the research literature in the following five areas of pedagogical content knowledge: (1) researchers' conceptualizations of pedagogical content knowledge, (2) teachers' understanding of how to organize and teach a subject, (3) perceptions of student learning realities (specific learning challenges within a subject area, students' developmental capabilities, and common misconceptions of learning certain topics within a subject area), (4) learning realities of today's learner, and (5) knowledge of relevance of topics to include in the curriculum. Though this study focused on high school English teachers' articulation of

pedagogical content knowledge, the literature review also includes research that extends beyond English language arts to provide a more comprehensive, in-depth view of the existing research of perspectives and articulation of pedagogical content knowledge.

The shift from quantitatively measurable and observable aspects of teacher quality, such as attributes and teacher actions, to unobservable ones, such as teacher thought processes, has grown out of cognitive psychology and diversification of research paradigms (Fang, 1996). In recent years, researchers have focused on “an investigation of teacher thought processes” (pp. 48-49) as an attempt to deconstruct the process of what and how teachers teach (Clark & Peterson, 1986; Fang, 1996). Interest in teachers’ thought processes also grew out of Shulman’s (1986, 1987) research in the 1980s on pedagogical content knowledge, presenting a perceived gap in how teachers approached their instruction as it related specifically to their content areas. Pedagogical content knowledge is defined as the formulation and representation of the subject-specific ideas, explanations, demonstrations, illustrations, examples, and analogies that render the subject comprehensive to others (Shulman, 1986). Shulman presented this as the “missing paradigm,” calling for research specifically connected to implementation of content by responding to specific questions around how teachers decided to teach and represent their content and gauge student understanding. Research findings over the past few decades have indicated that teacher thinking influences classroom instructional decisions (Fang, 1996; Tabachnick & Zeichner, 1984), suggesting that teachers’ views, theories, and expectations largely dictate how they approach instruction (Fang, 1996; Hall, 2004).

The issues of subject matter and teaching practice are integral in addressing the national issue of school improvement. National reform efforts that extend beyond national

legislation such as No Child Left Behind have looked beyond logistical and administrative issues to address what and how teachers teach. This reform effort has examined “best educational practices” as a starting point for clearly defining the “content of the curriculum and the classroom activities through which students may most effectively engage that content” (Zemelman, Daniels, & Hyde, 2005, p. 5). In an attempt to define good teaching, Zemelman, Daniels and Hyde (2005) examined multiple resources, including national standards projects documentation, instructional research meta-analyses, reports from pilot classrooms and subject matter professional associations, and teacher feedback across various disciplines. Their findings indicated that school environments that maximized learning opportunities for students included “challenging, authentic, and collaborative work” (p. viii).

Very little research has examined teachers’ pedagogical content knowledge perspectives within this framework of best educational practices. The existing research literature largely has explored general aspects of teachers’ construction of and beliefs about pedagogical content knowledge. Within the discipline of English language arts, there is limited research that investigates how experienced secondary English language arts teachers articulate pedagogical content knowledge. Of the studies that do exist, most have focused on case study approaches that have examined pedagogical content knowledge through observations, videotaped teaching sessions, and interviews with a small number of teachers, which is a limitation to the generalization of research findings.

In 2006, Dudley-Marling, Abt-Perkins, Sato, and Selfe conducted the first large-scale study to gather data on English language arts teachers’ own views about essential teacher qualifications, knowledge, pedagogy, and other potential factors influencing teacher quality. The researchers obtained survey data from 649 members of the National Council of Teachers

of English (NCTE), 83% of whom identified themselves as classroom teachers. They presented their findings in three categories: perceptions of the specific requirements of becoming to remain a highly-qualified English language arts teacher, perceptions of the “best evidence” that teachers are “highly-qualified”, and beliefs of NCTE’s role in supporting them in remaining highly-qualified teachers of English language arts. Similar to other studies that have examined students’ perspectives, participants in the NCTE study identified subject matter knowledge as essential to becoming and remaining a highly-qualified teacher of English language arts, citing specific knowledge such as “knowledge of literary/reading theory, literature, composition theory, and grammar and spelling” (p. 172). Additionally, they cited pedagogical content knowledge as essential, reporting that “specific knowledge of strategies for teaching literature, reading, writing, for motivating students, and promoting active learning” (p. 172) was essential to becoming and remaining a highly-qualified teacher.

Pedagogical Content Knowledge

In the 1980s, Shulman (1986, 1987) addressed the shift in teaching from that of primarily content (as evidenced over a century ago in teacher examinations) and the more recent bodies of research that examined pedagogical strategies (direct instruction, and wait time, and time on task). He called this absence of subject matter teaching that existed in the research literature as the “missing paradigm”. According to Shulman, the missing paradigm was pedagogical content knowledge. Shulman defined pedagogical content knowledge as the formulation and representation of the subject-specific ideas, explanations, demonstrations, illustration, examples, and analogies that render a subject comprehensive to others. Shulman’s research attempted to uncover the subject matter knowledge and expertise that teachers drew from in their teaching processes by examining (1) teachers’ knowledge

domains and categories and (2) teachers' strategies for enhancing the acquisition and development of pedagogical content knowledge. He identified three categories for examining pedagogical content knowledge: (1) considering the amount and organization of teachers' subject matter knowledge, (2) teachers' pedagogical knowledge for teaching a particular subject, and (3) teachers' curricular knowledge as defined by teaching programs, instructional materials, and indicators for the use of particular program materials in certain contexts.

Wilson, Shulman and Richert (1987) included the construct of pedagogical content knowledge as one of seven aspects of teacher characteristics they identified as essential to effective teacher practice. The other six elements of teacher knowledge included content knowledge, general pedagogical knowledge, curricular knowledge, knowledge of learners, knowledge of educational contexts, and knowledge of the philosophy and historical aims of education. Of these seven knowledge elements, additional research has suggested that pedagogical content knowledge has the greatest impact on teachers' actions (Gess-Newsome, 2002; Grossman, 1990). According to Wilson, Shulman and Richert (1987), the other six elements of the teacher knowledge base framework influenced teachers' development of pedagogical content knowledge (Wilson, Shulman, & Richert, 1987). They also suggested that these six teacher knowledge elements could be sub-categorized as components of subject matter knowledge and general pedagogical knowledge. The seventh element, pedagogical content knowledge, was viewed as the intersection of the subject matter and general pedagogical knowledge and was described as the teacher's "understanding of what it means to teach a particular topic as well as knowledge of the principles and techniques required to do so" (p. 118).

Subsequent research has presented extended conceptualizations of pedagogical content knowledge. Gess-Newsome (2002) pointed out that relatively few studies identified specific components of pedagogical content knowledge, perhaps due to what she termed as the “fuzzy boundaries” (p. 10) of pedagogical content knowledge. To help make these boundaries clearer, Gess-Newsome devised a teacher knowledge continuum that included two extremes: (1) an integrative model and (2) a transformative model of pedagogical content knowledge. Gess-Newsome described the integrative model as having three separate knowledge domains: (1) subject matter knowledge, (2) pedagogical knowledge, and (3) contextual knowledge. In the integrative model, teachers take knowledge from each of these three domains in implementing classroom practice. In this way, they are “mixing together” separate knowledge domains as they implement instruction. The transformative model is described as knowledge of subject matter, pedagogy, and context that are intertwined elements rather than separate domains. Gess-Newsome described this combination as a new knowledge base, pedagogical content knowledge, that the teacher then fluidly implements in his or her instruction. In this model, individual domains can only be separated out as a result of careful analysis (See Table 1).

Gess-Newsome described herself as falling between these two extremes, pointing out the need to recognize the foundational knowledge of subject matter, pedagogy, and context as well as their relationship with pedagogical content knowledge. Though this model is presented as an explicit way of understanding and examining pedagogical content knowledge, minimal research appears to have used this model as a theoretical research rationale.

Table 1

Overview of Integrative and Transformative Models of Teacher Cognition. (Gess-Newsome, 2002, p. 13)

	Integrative Model	Transformative Model
Knowledge Domain	Knowledge of subject matter, pedagogy, and context are developed separately and integrated in the act of teaching. Each knowledge base must be well structured and easily accessible.	Knowledge of subject matter, pedagogy, and context, whether developed separately or integratively, are transformed into PCK, the knowledge base used for teaching. PCK must be well structured and easily accessible.
Teaching Expertise	Teachers are fluid in the active integration of knowledge bases for each topic taught.	Teachers possess PCK for all topics taught.
Implications for Teacher Preparation	Knowledge bases can be taught separately or integrated. Integration skills must be fostered. Teaching experience and reflection reinforces the development, selection, integration, and use of the knowledge bases.	Knowledge bases are best taught in an integrated fashion. Teaching experience reinforces the development, selection, and use of PCK.
Implications for Research	Identify teacher preparation programs that are effective. How can transfer and integration of knowledge best be fostered?	Identify exemplars of PCK and their conditions for use. How can these examples and selection criteria best be taught?

Another example of extending Shulman's (1986, 1987) conceptualization of pedagogical content knowledge is Grossman's (1990) four pedagogical content knowledge domains: (1) subject-specific understandings of teaching, (2) specialized curricular knowledge, (3) knowledge of students' understanding, and (4) instructional strategies. Grossman also identified various possible sources of how teachers acquired pedagogical content knowledge, including teacher education experiences, subject matter knowledge

acquisition, and their observational experiences. Marks (1990) conceptualized pedagogical content knowledge using four categories that he claimed were highly integrated: (1) subject matter for instructional purposes; (2) student's understanding of the subject matter; (3) subject-specific instructional processes; and (4) subject-specific instructional, media such as texts and materials. While these conceptualizations provide additional details about pedagogical content knowledge, they have not been widely used in research that has examined teachers' development of pedagogical content knowledge.

Cochran, DeRuiter, and King (1993) defined pedagogical content knowledge as pedagogical content knowing. They described it as the teacher's understanding of pedagogy, subject matter content, student characteristics, and learning context and aligned this definition with a constructivist perspective of teaching and learning. Beattie (1995) expanded the conceptualization of pedagogical content knowledge by incorporating a fourth dimension, practical knowledge, into Shulman's (1986, 1987) construct of pedagogical content knowledge. Personal practical knowledge is defined as the knowledge teachers gain as a result of their experiences about their students, such as students' individual needs, interests, learning styles, strengths, and areas for growth (Beattie, 1995). Both of these conceptualizations added additional dimensions of pedagogical content knowledge. Cochran, DeRuiter, and King contextualized pedagogical content knowledge within a constructivist perspective while Beattie added an additional pedagogical content knowledge dimension. Neither conceptualization has been prominently used as a theoretical model for the examination of pedagogical content knowledge.

Shulman's (1986, 1987) construct of pedagogical content knowledge was the first attempt to define the interrelated nature of content knowledge and pedagogy. Several other

researchers have presented variations upon Shulman's original construct. While these expanded conceptualizations have contributed to the research base on pedagogical content knowledge, in practice researchers continue primarily to use Shulman's construct of pedagogical content knowledge as a theoretical basis for their research. This may be due to the variation in research attempts to explicitly measure specific components of pedagogical content knowledge. To date, there is no one agreed-upon conceptualization of pedagogical content knowledge. Shulman's construct, however, has been instrumental over the past two decades in providing all researchers with a common framework for understanding and investigating specific components of pedagogical content knowledge. Thus, Shulman's model is integral to the theoretical framework of this study.

This section of the literature review has provided an overview of the research literature on researchers' conceptualizations of pedagogical content knowledge. The next section of the literature review discusses knowledge of how to teach a subject and curricular organization, two of the four elements of pedagogical content knowledge identified by Wilson, Shulman, and Richert (1987).

Knowledge of How to Teach a Subject/Curricular Organization

In order for a teacher to implement effective instruction within a specific subject area that meets the learning needs of students, it is essential for that teacher to have specific content knowledge and subject matter expertise. Research has indicated that aligning teachers' instructional pedagogical beliefs with current educational reforms requires careful examination of teaching as well as thoughtful reflection (Swars, Hart, Smith, Smith and Tolar, 2007).

In addition to an understanding of how to teach a subject, a teacher must also have a comprehensive understanding of curricular organization. Shulman (1986) illustrated this with the example of biology:

The biology teacher must understand that there are a variety of ways of organizing the discipline. Depending on the particular series of ones' biology text, biology may be formulated as a series of molecules from which one aggregates up to the rest of the field, explaining living phenomena in terms of the principles of their constituent parts; or as a science of ecological systems from which one disaggregates down to the smaller units, explaining the activities of individual units by virtue of the larger systems of which they are a part; or as a science of biological organisms, those most familiar of analytic units, from whose familiar structures and functions and their interactions one weaves a theory of adaptation. The well-prepared biology teacher will recognize these and other alternative forms of organization and the pedagogical grounds for selecting one under some circumstances and others for other purposes. (p. 13)

As mentioned in Chapter 1, research that has examined practicing teachers' belief systems regarding their knowledge of how to organize and teach a subject has suggested that teachers' subject-specific beliefs are usually compared to general pedagogical practices, such as classroom routines and procedures (Aguirre, 2002; Speer, 2008). An example of this type of generalization is "learner-centered" teaching and learning beliefs. Though a teacher may hold such beliefs, a broad generalization does not provide detail about which specific practices the teacher believes should be used to create a classroom environment that positively impacts student learning within a specific discipline (Speer, 2008). Research has attempted to measure general theoretical beliefs regarding teachers' subject matter knowledge and curricular organization and the possible influences that these beliefs might have on teachers' implementation of instruction (Agee, 1998; Eberle, 2008; McDiarmid & Ball, 1989; Muchmore, 2001; Richardson et al., 1991).

Teachers' perceptions of their own teaching practices include such generalizations about contextualizing their teaching practices to the subject and situation being presented,

instructional approaches that consist of a combination of teaching approaches and methods, and concern with creating connected learning activities and experiences for their students (Bell, 2007). Subject and situation specific methods have been found to be an essential foundational element of the knowledge that teachers should have, particularly in regard to teacher reflection on implementing methods that are contextualized to their specific teaching contexts (Bell, 2007). This section of the literature review is organized into three subsections of the research literature regarding teachers' perceptions of how to organize and teach a subject: (1) elementary-level, (2) middle and high school-level, and (3) post-secondary.

Elementary-Level

Much of the existing research on English language arts teachers' pedagogical content knowledge development of how to organize and teach a subject includes studies of elementary-level teachers. Asselin (2000) conducted a study in Canada that included 39 pre-service teachers who participated in a semester-long reader response component within an elementary-level language arts methods course in which they were enrolled in Western Canada. Asselin analyzed data on students' thinking around reading process, reading and writing relationships, and literature. Asselin implemented two stages of experiential learning activities in which students experienced reader-response based instruction and novel reading and literature circle activities. Students participated in reading, discussing, and planning a literature unit of study. The study yielded eight prevalent themes of pre-service teachers' beliefs about reading and literature: (1) reading as interactive process, (2) variance in meaning of texts, (3) pleasure reading as part of instruction, (4) writing that captures thinking processes of readers, (5) using writing to validate thoughts and feelings of reading, (6)

writing as increasing meaning of texts, (7) having distinct features, and (8) using literature across the curriculum. This study contributed to the small body of research at the time that addressed how to improve teacher subject knowledge and curricular organization. Findings from this study suggested that implementing instructional activities in teacher education programs supports pre-service teachers to identify their beliefs and integrate theory and practice as a result of examining their own experiences with reader response theory and pedagogy.

Yeo's (2007) study in British Columbia sought to clarify elementary-level teachers' definitions of composition and literacy, their conceptualizations of how to teach it, and social and historical implications of teachers' perceptions of both. The population of Yeo's study included elementary school level teachers in British Columbia from a mid-to-upper socio-economic neighborhood located near a university. Yeo's approach was qualitative; she collected data through conversations and semi-structured interviews. A total of 12 teachers and the principal of the school participated in the study. In her research, Yeo identified four categories of literacy instruction: (1) traditional, (2) subjective, (3) critical, and (4) post-structural/postmodern. Yeo expected teachers' instructional approaches to fall into one of the four categories; however, in her research, she discovered that social contexts alone did not necessitate teachers' conceptualizations of their practice. Instead, she determined that teachers had "deeply personal relationships" with literacy and that it was this relationship between "self and context" that drove their individual approaches to teaching.

The study yielded a number of findings in regard to the conceptualization and teaching of literacy. In this study, literacy was defined as the teaching of reading and writing. The first was that reading was central to conceptualizations and teaching of literacy, with

reading comprehension and interpretation as essential components. Her second finding was that teachers perceived literacy instruction as a traditional one that included hard text, desks, paper, pens and pencils rather than “new literacies” such as digital media and computer-based instruction. Yeo’s third finding was a connection between teachers’ own literacy histories and their perceptions of composition and literacy. A fourth finding was that teachers failed to perceive literacy as a “complex phenomenon” beyond the basics of reading and writing.

The purpose of Brindley and Schneider’s (2002) study was to understand fourth grade teachers’ perceptions of their writing development and writing instruction. Participants included 125 fourth-grade teachers in a diverse cultural, racial, and socioeconomic school district in the Southeastern United States. Participants completed a survey that included seven Likert-type rating scales for responding to questions about their writing and instruction. The survey also included eight open-ended response questions. The researchers used both quantitative and qualitative data analyses to interpret the data. Findings indicated a wide range of writing development and instructional perspectives, which appeared contradictory to a substantial body of research-based identification of best writing practices instruction. The researchers described these research-based best practices as individual student/teacher conferences, approaches that support various writing situations and realities in writing development, activities that promote critical-thinking and problem-solving, literary analysis and response, pre-writing, and rubrics that align with instruction. In contrast to these instructional best writing practices, data from this study suggested that teachers believed that prescriptive test formats would result in higher student learning outcomes. Additionally, findings suggested that the participants’ responses did not reflect the social and changing

aspects of the relationship between teachers' use of cognition and language in their practice. The researchers pointed out a need for teacher educators, literacy researchers, and state and local policy makers to come together to make decisions regarding how teacher-training programs can more effectively support teachers in the content and delivery of writing instruction.

Phelps and Schilling (2007) developed a survey in an attempt to identify the reading pedagogical content knowledge needed for effective teaching of elementary-level reading. The study focused on two specific areas of teaching reading, which were (1) knowledge grounded in the structure and language of text, and (2) literary conventions such as genre and style. In their analysis, the researchers attempted to determine what dimensions effectively characterized content knowledge for teaching reading, and whether it was possible to develop reliable measures of these identified dimensions. Findings indicated that content knowledge for teaching reading was comprised of two unique domains. These domains included comprehension and word analysis. The researchers then identified numerous sub-categories, of knowledge needed to teach reading for each of these domains. Comprehension included sub-categories such as knowledge of reading to assess comprehension, teaching knowledge of using word structures to understand word meaning, and teaching knowledge of determining the meaning of unknown words. Word analysis included sub-categories, such as knowledge of phonemes, ability to interpret spelling to assess phoneme knowledge, and ability to interpret student reading to assess why students misread particular words.

The researchers indicated a need for future research that addresses a wider range of content knowledge for teaching reading. The researchers also discussed the need for developing tools that take into consideration content knowledge for teaching, content

knowledge development, and the contribution of content knowledge in improving instruction and student achievement. Other future research included a need to investigate the knowledge of experienced teachers as compared to those with less or no teaching experience.

Using a mixed-methods approach, Massengill-Shaw, Dvorak, and Bates (2007) sought to explore perceptions of pre-service teachers of their pedagogical content knowledge beliefs of literacy based on the assessment of their literacy beliefs at the beginning and end of their participation in a Teaching Reading Methods course. The study included 52 elementary education participants at a large Midwestern research university. All were senior-level students. They engaged in three various pre-test assessments. The first was the Theoretical Orientation to Reading Profile (TORP) (DeFord, 1985), which gauged their beliefs about reading instruction and included information that focused on phonics, comprehension, fluency, strategies, sight words, text, and reading difficulties beliefs (p. 231). This was followed by the Teachers' Sense of Efficacy for Literacy Instruction Scale (TSELS) (Johnson, 2002), a Lickert-scale measure of teachers' literacy beliefs. Participants also responded to an open-ended, short-answer questionnaire, in which they described their knowledge about personal reading practices as well as their own personal reading practices. Post-tests were conducted at the time that participants completed the course.

The researchers analyzed the data using both quantitative and qualitative methods. Findings from the TORP indicated a substantial shift in teachers' beliefs about specific aspects of literacy instruction from the pre-test to post-test. One example of this was that 77% of the participants shifted from a phonics-based belief system to that of skills orientation. The TSELS asked questions about how they would model, motivate, teach literacy, and provide feedback to students. Pre-test scores indicated that participants had high

self-efficacy, with a mean score of 6.45, which indicated the majority of participants rated themselves as having some degree to a high level of self-efficacy. Ratings on the post-test included a mean score of 7.48. A paired-samples t test indicated an increase in the overall total score, with a statistically significant correlation of .44.

On the survey pre-test, participants were asked questions, such as how children learn to read and strategies that participants would implement if a student did not understand a word during oral instruction. Over half of the participants reported that they would implement reading comprehension strategies, such as having students define words that they did not understand, break down the passage, discuss the text, read the passage again, and ask students to read passages more slowly. On the post-test, there was an increase in the number of participants who would employ sounding out strategies, using context to make meaning of the word, and chunking/breaking the word down. On the post-test, there was also a larger variety of specific strategies that participants reported they would implement, such as cross-checking, using pictures, taking an educated guess, and helping students devise specific comprehension approaches, such as graphic organizers, story maps, KWL and Venn diagrams.

This study suggested that pre-service teachers' beliefs may be affected by the implementation of explicit teaching practices of their instructors, such as drawing upon prior knowledge, experiences and beliefs as participants learned new information during the semester, as well as participants' opportunities to practically apply their learning on a weekly basis in elementary school classrooms. These findings appear to contradict previous research that suggests that teacher education programs have a minimal impact on teachers' instructional beliefs.

Middle and High School-Level

Research at the middle and high school levels has also explored how teachers organize and teach their subject matter. Beswick (2005) examined mathematics teachers' pedagogical content knowledge by exploring the connection between teachers' beliefs about teaching mathematics and the actual practices they implemented in their classroom instruction. The study included 25 secondary mathematics teachers in Tasmania and the degree to which teachers were considered to be constructivist. The researchers implemented a 26-item, Likert-scale survey that included mathematics teaching and learning belief statements. Teachers rated themselves for each belief statement. Beliefs and practice were both broadly defined rather than connected to a specific classroom context. Teachers fell into three distinct categories: (1) content and clarity, (2) relaxed problem solvers, and (3) content and understanding. The content and clarity group held the belief that teachers needed to explain content clearly to students, even if it resulted in teachers telling students the correct answers. The relaxed problem solvers believed that mathematics instruction should focus on more than just computation. They also did not believe that their teaching role should focus primarily on providing answers or clear solution methods. This group also was less concerned with content coverage and sequencing. The content and understanding group believed in focusing on students' understanding of content, as well as covering and sequencing content.

These findings were compared to data from a 27-item Likert-scale survey collected by the researchers of the students' beliefs on teaching and learning. Findings indicated that the extent to which teachers' classroom environments were constructivist (focused on a student-centered, problem-solving view to teaching and learning) correlated with the extent

to which teachers held a problem-solving belief of teaching and learning. Future research recommendations included the need to identify and examine the specific teacher beliefs and practices that create more constructivist classrooms.

As part of a larger study conducted by the National Research Center on the Gifted and Talented at the University of Virginia, Brighton (2003) analyzed data from teachers at four middle schools in two states. In addition to a series of interviews, teachers participated in three years of intensive professional development aimed at increasing their knowledge and skills in assessment and differentiation of instruction. Findings included alignment between professional development and coaching that teachers received and teachers' perspectives of how a "middle school classroom should look" (p. 185). The study pointed out a gap between teachers' perceptions of classroom practice and actual practices implemented by teachers, suggesting that changing teacher belief systems are a challenging prospect and process (Brighton, 2003), thus stressing the critical need to construct new approaches to teaching and learning while acknowledging and building upon existing teacher beliefs.

Two studies have explored English language arts' teachers' conceptualizations of pedagogical content knowledge with larger participant pools. The first, conducted by Richards (2001), focused on the research gap between teachers' perspectives of reading knowledge, pedagogy, and students' reading conceptions. Richards conducted an exploratory study that examined 24 elementary and secondary teachers' reading beliefs, knowledge, pedagogy, and ways in which students conceptualized reading. Richards and her educational administration students created teacher and student surveys. Richards' students then collected the data using these survey questions. Richards guided her research by questioning teachers' reading orientations, knowledge base of reading and multiple literacies, pedagogical

approaches to teaching reading comprehension, and teachers' approaches to assessing reading comprehension.

Results of Richards' (2001) study suggested that teachers' perceptions about reading and their reading instruction are impacted by school and/or district-mandated reading programs, raising the question as to why teacher candidates appear to be so strongly influenced by these programs if they possess a strong theoretical reading process foundation and are "prepared to teach reading" (p. 12). Richards' findings align with other research findings that suggest that teachers' reading instruction is influenced by teachers' schools (Richards, 1999; Zancanella, 1991). Of the 24 teachers who participated in this study, 23 did not identify reading comprehension strategies as part of their knowledge or pedagogical approaches to instruction, focusing instead on "discrete skills or systematic phonics instruction" (p. 13). This finding could indicate that teachers may see content and pedagogy as separate, thus suggesting that these teachers either do not possess pedagogical content knowledge or do not implement it in their thinking about and approach to instruction.

Agee (1998) examined the social and cultural factors influencing 18 experienced high school English teachers' assessments of their instructional effectiveness of teaching literature and how these assessments influenced their instructional decisions. Data included transcribed interviews, classroom observations, reflection statements written by the teachers, and videotapes of classroom teaching sessions. Findings indicated that teacher participants used similar global strategies for gauging their instructional success. Three levels of assessments were revealed in the data: (1) moment-to-moment, (2) term-to-term, and (3) long-range assessments. Factors such as teachers' own personal histories, goals, and students also influenced how teachers assessed instructional effectiveness. Student talk was identified as

the strongest evidence piece for how these teachers determined the effectiveness of their instruction. The teachers linked student talk to four instructional processes: making immediate and long-term goals for teaching literature, implementing changes in literature teaching approaches, supporting students in learning specific skills, and supporting students in achieving higher levels of intellectual understanding.

However, there were differences reported in the data in teachers' ideas of the factors influencing what constituted highly effective instruction. One example was that some teachers expressed interest in promoting engagement while others expressed interest in student achievement. All of the teachers' approaches to teaching literature were rooted in their personal experiences as readers. Grade level also influenced teachers' perceptions of highly effective instruction. Factors such as race and socio-economic realities of students additionally appeared to influence teachers' goals for teaching literature. Agee's recommendations for future research included the need to examine how teachers developed evidence for assessing the effectiveness of their instruction. Another recommendation was to study a large group of teachers over an extended period of time to gauge how the evidence for assessing their instructional effectiveness informed their practice over a period of time. While both the Richards and Agee studies included larger participant groups to examine English language arts teachers' pedagogical content knowledge, data for each study were limited to one subcategory of English language arts instruction. The Richards study focused on reading and the Agee study focused on literature.

Recent research also has focused on comparing beginning teachers' reports of general pedagogical knowledge (classroom procedures) and pedagogical content knowledge (vocabulary instruction) to those of experienced teachers (Gatbonton, 2008). Using

quantitative and qualitative data analyses, Gatbonton examined the teaching thought processes of four novice ESL teachers who taught adult learners and compared these to a previous study of experienced teachers' thought processes (Gatbonton, 1999). These teachers viewed videotaped recordings of one hour of their instruction and verbalized their thought processes. Findings indicated that novice teachers, over the period of a few years, could acquire pedagogical knowledge comparable to that of experienced teachers. Findings also indicated the need for future research to examine teacher training programs and the rate at which teachers could acquire essential pedagogical knowledge and skills as compared to acquiring these skills over years of experience.

Another area of focus within the research literature is recent research on mentor perspectives of beginning teachers' pedagogical content knowledge (Shea & Greenwood, 2006, 2007). Shea and Greenwood collected data regarding mentors' perceptions of novice science teachers' general pedagogical knowledge and pedagogical content knowledge. Mentor teachers reported their perceptions for teachers who had participated in teacher education programs versus those who had taken alternative certification routes. Of the 79 surveys analyzed, mentor teachers reported higher levels of pedagogical knowledge and pedagogical content knowledge for novice science teachers who had completed traditional teacher education programs and participated in student teaching experiences. This finding suggests a need for teacher mentors to learn specific strategies for supporting the pedagogical content knowledge development of those new science teachers who have little or no classroom experience or teaching skills. Examples of these specific strategies include supporting teachers in setting clear instructional goals, using appropriate formative and

summative assessment tools, and providing mentoring that provides new science teachers with a variety of instructional strategies for approaching their practice.

Postsecondary-Level

Research at the post-secondary level has explored how university instructors and pre-service teachers articulate the organization and teaching of a subject. Some research has also examined how novice teachers (teachers within their first two years of entering the profession) organize and teach their subject. Eley's (2006) research on teacher perspectives of how to organize and teach a subject pointed out that current research findings of correlations between teacher thinking and implementation of practice centered around teacher conceptions of teaching and learning that were generalized reflections about teaching and learning, in which participants responded to such questions as "What is the teacher's role?, What is regarded as good teaching?, and Does teaching influence student learning?" (Eley, 2006, p. 191). Eley presented the notion that teacher conceptualizations might be a result of reflective thinking after the actual act of teaching. In this reflective stance, he suggested that teachers might not have responded to questions about what teaching is, and as such, their responses were an attempt to think back and construct a coherent model for their own practice. Eley extended beyond these generalized reflective interviewing approaches to obtain contextualized data on teacher thinking. He recognized the existence of a relationship between teacher conceptualizations of teaching and general teaching approaches, but claimed that the research does not show any "evidence that conceptions of teaching constitute a direct functional influence on specific teaching actions" (p. 194).

To address this perceived gap in the research, Eley (2006) conducted a study that explored teachers' thinking around specific teaching practices as they related to

contextualized teaching situations. The study included 29 university teacher participants across multiple disciplines who primarily taught first and second year undergraduate students. The interviews called upon teachers to describe a recent teaching episode, focusing first on a general description and then description of a more specific aspect of the class. They were then asked to describe their thinking process during the time when they were planning that part of the class, and finally describe how their planning related to their actual implementation of instruction. Eley identified six categories of teacher thinking: (1) sensitivity to existing student knowledge, (2) student engagement, (3) student thinking during teaching, (4) thinking as a basis for planning, (5) introspection as a source of models of student thinking, and (6) explicit use of teaching conceptions in decision making (Eley, 2006). Eley found that teachers' thinking about teaching and learning was contextualized to specific teaching actions in relation to the topic or content being presented rather than general conceptions of teaching and specific teaching practices. These findings present the implication that implementing specific teaching practices that are aligned to specific teaching situations and contexts should be a major focus of teacher education and development.

Fives and Buehl's (2008) research explored perspectives of pre-service teachers regarding pre-service teaching knowledge and ability beliefs (Fives & Buehl, 2008). Their work made explicit the individual voices of teachers as one contribution to the development of a framework that would support teachers in understanding their own perspectives better. Another reason they conducted this study was to use teachers' perspectives in developing a quantitative means of measuring teachers' instructional beliefs. This study included qualitative data gathered from 53 pre-service and 57 practicing teachers. The main goal of the first study was to obtain teachers' perspectives of "what knowledge teachers identified

and valued as necessary for teaching” (p. 142). The researchers implemented an open-ended teaching belief questionnaire to assess teaching knowledge and ability beliefs. Based on emergent themes in the data, Fives and Buehl organized the data into five specific categories of teaching and learning: (1) pedagogical knowledge, (2) knowledge of children, (3) content knowledge, (4) management and organizational knowledge, and (5) self/other knowledge. Pedagogical content knowledge was included as a subcategory of the content knowledge theme. Participants in the study reported the need for pedagogical content knowledge, which they described as knowledge of the subject area, how to teach course material to students, how to make knowledge accessible to students, implementation of hands-on learning activities, and knowledge about managing and supporting student learning.

Mosely, Ramsey, and Ruff (2004) explored pre-service teachers’ construction of pedagogical content knowledge during extended field experiences, concluding that content-specific, school-based experiences may afford pre-service teachers greater opportunities to focus on content and instructional strategies at deeper levels (Lowery, 2002; Mosely, Ramsey, & Ruff, 2004). The researchers noted that as pre-service teachers engaged in field experiences and regular reflection sessions, they engaged in “clarifying, confronting, and expanding [their] ideas, beliefs and values about science teaching and learning as well as expanding [their] ideas, beliefs and values about teaching” (p. 11).

Bell’s 2007 study focused on data about teacher beliefs and teaching methodology. He interviewed 30 practicing teachers enrolled in a master’s in linguistics program at Ohio University and also obtained data from online discussion board postings. Bell obtained data of how teachers defined and described their own teaching methodologies, as well as data that distinguished method from approach. He also analyzed 82 teaching autobiographies and 29

randomly selected teaching journals to obtain additional data regarding teachers' methodology perspectives. From the interview data, Bell discovered that most of the participants described their own teaching methodology as eclectic. These teachers stated that their own teaching practices were contextualized to the subject and situation being presented and included a combination of teaching approaches and methods. From their teaching journals, Bell found that teachers were concerned with creating connected learning activities and experiences for their students. Bell presented knowledge of methods as an essential foundational element of the knowledge that teachers should have, particularly in regard to teacher reflection on implementing methods that were contextualized to their specific teaching contexts.

Grossman (1989) examined six novice teachers' pedagogical content knowledge of English language arts. This qualitative study compared three teachers who had participated in traditional teacher education programs and three who had entered the profession of teaching through alternative certification routes. Grossman examined teachers' conceptualizations of what content to teach, purposes for teaching English, and teachers' knowledge of student understanding. Her findings indicated that subject specific coursework in a teacher education program influenced teachers' pedagogical content knowledge by providing a framework for teachers' thinking and approaches to teaching English language arts.

This section of the literature review has provided an overview of the research literature of teachers' pedagogical content knowledge perspectives of (1) knowledge of how to teach a subject and (2) knowledge of how to organize the curriculum within a specific subject area. The next section of the literature review discusses student-learning realities, one of the four elements of pedagogical content knowledge identified by Wilson, Shulman, and

Richert (1987), which is organized into two sub-sections. The first discusses student learning realities for today's learner. The second sub-section highlights teachers' perspectives of student learning, as well as research that has explored pre-service teachers as learners in their development of pedagogical content knowledge.

Student Learning Realities: Today's Learner

Recent research has explored the two most current generations of learners: (1) the Net Generation learner (also referred to as Millennials or Generation Y) and (2) the Generation Next learner (also called Generation Z). These two generations represent the most diverse generation of learners in history (Eisner, 2005). They have been described as the most technically literate generations to date due to a lifetime of exposure to modern technological advances, such as the computer, Internet, cell phone, and other digital technology. These learners are considered experiential students who learn as a result of active opportunities, such as games, simulations, and hands-on activities (Sweeney, 2006). They are accustomed to collaboration and innovation (Tapscott, 2009). They largely learn by doing, and as such, have a shorter attention span (Litten & Lindsay, 2001) when it comes to the more traditional, passive teaching and learning model of previous generations such as Generation X and the Baby Boomers. These two generations of learners also are accustomed to immediate, ongoing feedback regarding their academic progress (Sweeney, 2006; Tapscott, 2009).

This active learning approach is referred to in the research literature as a generative approach to teaching and learning, where the focus is on a learner-centered approach to education. This is in contrast to the transmission, or Industrial Age, approach to teaching, where the teacher is considered the expert, delivers a lecture-based curriculum, and is the

“pourer-in” of knowledge for the student (Cambron-McCabe & Dutton, 2000; Tapscott, 2009). Much of the most recent research has focused on the first of these two generations, the Millennials, Generation Y, or Net Generation learners, born between January 1977 and December 1997 (Tapscott, 2009).

Tapscott recently conducted a large-scale study of Net Generation learners. The first phase of this research entailed a pilot interview that included 1,750 people between the ages of 13 to 20. The second phase included interview data from 5,935 participants between the ages of 16 to 29. Tapscott’s findings indicated eight characteristics of this generation. The first was freedom. One example of freedom was the ability to choose where to work as well as when. The second characteristic was customization, such as personalizing technology (cell phone features, podcasts) and work environments (working offsite, customizing job descriptions). The third characteristic was scrutiny. For example, participants reported using digital technologies to learn about the world around them, to distinguish fact from fiction, and to scrutinize products before purchasing them.

The fourth characteristic, integrity, consisted of personality traits, such as honesty, consideration, and tolerance. Findings indicated collaboration, the fifth characteristic, as an everyday aspect of study participants’ lives. The sixth characteristic, entertainment, included an expectation for work to be enjoyable and fulfilling. It also included taking a few moments away from work to play an online game or check a Facebook profile. The seventh characteristic was speed. Participants reported expecting instant feedback and responses, for example. The final characteristic was innovation, which was the need to stay current with the latest technology as well to participate in collaboration and creativity in the workplace.

In regard to learning, Tapscott's research findings suggest that as learners, this generation is accustomed to active and interesting learning experiences where students have choice regarding what they learn as well as when, where and how. Findings also suggest that Net Generation learners desire learning experiences that contain real-world relevance and are accustomed to immediate feedback regarding their academic progress.

Another recent attempt to quantify the learning traits of this Millennial generation was a recent empirical study conducted by Borges, Manuel, Elam, and Jones (2006). In this study, the researchers implemented a Personality Factor Questionnaire to 809 medical students at the Northeastern Ohio Universities College of Medicine. The data were analyzed using a multivariate analysis of variance to determine if there was significant variance between Generation X and Millennial student study participants. Study participants included 555 Generation X medical students (born between 1965 and 1980) and 254 Millennial/Generation Y medical students (born after 1981). Characteristics of the two groups of students were studied over a ten-year period. Findings of the study indicated that Millennial generation students were more warm and outgoing, abstract then concrete, adaptive and mature, socially bold and venturesome, sensitive and sentimental, self-doubting and worried, more open to change and experimentation, and more organized and self-disciplined than their Generation X counterparts. The results of this study called into question the need for future research to explore and analyze the possible implications of Millennial personalities on teaching and learning pedagogies, ways in which educators might restructure their curriculum design, instruction and assessment methodologies to meet the learning needs of Millennial students.

The work of Zemelman, Daniels, and Hyde (2005) synthesized a wealth of empirical research on best practices for teaching and learning. According to the researchers, these best

practices were integral to curriculum-based reform that provides equity and opportunity for all students to access to education that will support them in reaching and achieving academic rigor. From their extensive data analysis, Zemelman, Daniels, and Hyde (2005) identified 13 characteristics of effective teaching and learning practices. These 13 characteristics are teaching and learning practices that are (1) student-centered (2) experiential, (3) holistic, (4) authentic, (5) challenging, (6) cognitive, (7) developmental, (8) constructivist, (9) expressive, (10) reflective, (11) social, (12) collaborative, and (13) democratic. The researchers organized these characteristics are organized into three clusters, which are described in more detail below.

Cluster One: Student-Centered

1. Student-centered: the investigation of students' own questions and interests
2. Experiential: active, hands-on learning experiences
3. Holistic: examining whole ideas, events, and materials in meaningful contexts rather than in isolation of one another
4. Authentic: materials that are real, rich, and complex versus those that are oversimplified, controlling, or "watered down"
5. Challenging: opportunities for students to engage in real challenges, choices, and responsibility for their learning

Cluster Two: Cognitive

6. Cognitive: the development of conceptual understanding through inquiry and self-monitoring of students' thinking
7. Developmental: activities that align to the developmental level of students

8. Constructivist: interactive process of recreating and reinventing content learned (i.e. language, literacy, mathematics)
9. Expressive: use of a range of communicative media, such as speech, writing, drawing, poetry, dance, drama, music, movement, and visual arts to support student construction of meaning
10. Reflective: opportunities for students to reflect, debrief, articulate what they feel, think, and learn

Cluster Three: Social

11. Social: interactive, social learning opportunities that are collaborative and democratic
12. Collaborative: cooperative learning activities that align with social power of learning rather than individualistic, competitive approaches
13. Democratic: students learning connected to their actual classroom and school communities

Zemelman, Daniels, and Hyde's (1998, 2005) findings align with other research that describes "authentic instruction" as an active process in which students construct knowledge, draw conclusions, and connect learning to their own lives (Newmann, 2001).

Student Learning Realities: Teacher Perspectives

Another aspect of pedagogical content knowledge is a teacher's understanding of the realities of student learning. Realities of student learning include a teacher's understanding of students' specific learning challenges within a particular subject area, understanding of students' developmental levels and overall capabilities, and knowledge of some misconceptions of learning (faulty schema construction) (Wilson, Shulman, & Richert,

1987). This element of pedagogical content knowledge is particularly relevant for today's teacher due to recent technological advances that have contributed to a generation of learners that are accustomed to more hands-on, experiential learning opportunities rather than a more passive, traditional teacher-centered approach to teaching and learning.

Research has shown that early in their professional careers, teachers shift their knowledge and instructional perceptions as they gain professional teaching experience. These include themes such as reconstructing teaching beliefs based on teaching experiences that provide exposure to the varying learning realities and needs of students, increased metacognition in content knowledge and instructional beliefs, focusing on a concern for students rather than the teacher's own needs, and creating and implementing increasing capability in context-specific thinking and problem solving (Dershimer & Kent, 1999; Kagan, 1992).

In their investigation of teachers' construction of pedagogical content knowledge, Chaim, Keret, and Ilany (2007) suggested that as teachers engaged in authentic proportional reasoning tasks that included both mathematical theory and application to practice, they increased their pedagogical content knowledge of proportions and ratios. Additionally, they gained a deeper understanding of the relationship between understanding and teaching a specific task and the various types of student thinking that a specific task would require. Swars, Hart, Smith, Smith and Tolar's (2007) examination of pre-service mathematics teachers' pedagogical content beliefs over the course of two methods classes over two semesters indicated that pre-service teachers shifted from more traditional pedagogical beliefs about teaching and learning mathematics to those that aligned with current educational reforms, which in this case was a constructivist, student-centered approach to

teaching and learning. Muchmore (2001) conducted a life history case study of a 25-year veteran teacher to examine her beliefs about and development of teaching literacy. Data collection included a series of 10 formal interviews, additional informal interviews, and 50 participant-observer classroom observations. Findings indicated that the teacher participant's views of literacy were influenced by her own personal life experiences and observations of how students learn.

Researchers have also examined the development of pedagogical content knowledge in pre-service teachers. One research example of this was a case study analysis conducted by Kleinfield (1992) in an effort to develop pedagogical content knowledge in prospective English language arts teachers. A high school English teacher who had been identified as teaching Shakespeare in a way that was accessible and comprehensive to students participated in this study. Additionally, 34 graduate teacher education program students participated in this study. Kleinfield first developed a case study by interviewing the experienced teacher about what Shakespearean literature she decided to teach, how to get the students interested in difficult literature, ways of dealing with the difficult language present in Shakespearean plays, ways to maintain student interest, ways to evaluate student learning, and which supplementary materials to include (such as films).

Kleinfield (1992) then used data from the case study in her graduate-level teacher education classes in Alaska. Students wrote papers that addressed a number of questions regarding what literature students would prefer to teach, the teaching of *Hamlet* and other works of classic literature. Questions included students' instructional purposes, methods, and evaluation methodologies for teaching *Hamlet*, *Julius Caesar*, and a Langston Hughes poem. Student participants then were required to re-write/revise their papers after having

participated in a class discussion that focused on the paper questions. The researcher coded the data using four categories: (1) number of issues considered in choosing a literary work, (2) number of problems identified in helping students understand *Hamlet*, (3) number of methods used in teaching *Hamlet*, and (4) number of purposes in teaching Shakespeare. In comparing data from the two papers, findings indicated a 64% increase in the pedagogical content knowledge of teaching *Hamlet* for the student participants who were English majors. The non-English majors showed only 36% knowledge transfer. For the teaching of the Langston Hughes poem, the English majors demonstrated more pedagogical content knowledge transfer than the non-English majors. Results of this study also indicated that teacher education students have weak pedagogical content knowledge and pointed out the benefit of using case studies of teaching to help students develop and transfer pedagogical content knowledge into their own thinking and practice.

Gudnundsdottir (1991) examined the pedagogical content knowledge of one expert English language arts teacher. Findings from this study were part of a larger research project that examined the practice of four high school teachers who investigated how student teachers learned to teach the academic subjects in which they majored. The researcher discussed the importance of pedagogical content knowledge for high school English teachers in their teaching of literature, pointing out that a teacher's orientation to literature affects what he or she believes is important to know, interpret, and seek evidence for interpretation. The data from this study focused primarily on literature and literacy analysis teaching strategies.

In the Gudnundsdottir (1991) study, the one study participant described her use of a self-created teaching model that organized skills into four categories. The first category was

skills that centered on students' understanding of the literal meaning of the literature. The second category consisted of connotative meaning and what connotative meanings revealed about characters within the literature being studied. The third category focused on level of textual interpretation, such as how the authors used symbols within the literature to communicate views of life or particular beliefs and views of the characters. The final category consisted of application and evaluation. This category focused on teaching students how to connect textual meanings to their own lives. The data analysis showed that the teacher's actual classroom practice included three of the four reported categories.

Another example of a research effort that attempted to examine specific teaching practices that support student learning needs is the national educational research organization WestEd. WestEd has explored ways of making secondary reading instruction explicit to support teachers in constructing knowledge and expertise as they implement quality reading practices that support increased student learning outcomes. In their research, WestEd researchers Shoenbach, Greenleaf, Cziko, and Mueller (2000) discovered that as teachers construct reading instruction schema over time, they develop strategic skills that support classroom learning and students' reading skills development. Shoenbach and her colleagues conducted case studies of San Francisco Bay Area students and students' own perspectives on the origins of their reading difficulties, and then combined these perspectives with their teacher practice research findings to develop a theoretical model that incorporated four interactive dimensions of a student's classroom experience (social, cognitive, personal, and knowledge). Their research suggested that when teachers implemented explicit reading support strategies within these four dimensions, students became more engaged readers; furthermore, empirical studies exploring teachers' use of these strategies correlated with

statistically significant student reading gains (Schoenbach, Greenleaf, Cziko, & Hurwitz, 1999).

This section of the literature review has provided a general overview of the research literature of teachers' pedagogical content knowledge perspectives of student learning realities. The next section provides an overview of topic relevance, the fourth aspect of pedagogical content knowledge identified by Wilson, Shulman, and Richert (1987).

Topic Relevance

Shulman (1986) described topic relevance is the teacher's ability to understand a specific topic within a discipline, as well as the ability to identify which topics are essential to include in his or her instruction. In their research of pre-service teachers' pedagogical content knowledge of literacy beliefs about reading instruction, Massengill-Shaw, Dvorak, and Bates (2007) focused on aspects of topic relevancy, such as phonics, comprehension, fluency, strategies, sight words, text, and reading difficulties beliefs (p. 231). Findings of this study suggested a substantial shift in teachers' beliefs about specific relevancy of these aspects of literacy instruction. For example, after learning about teaching reading comprehension, 24 of the pre-service teacher participants reported that they would use assistive strategies to support student comprehension, such as story maps, graphic organizers, KWL, Venn diagrams, and summarizing, compared to only three participants who reported these strategies at the beginning of the study.

As part of a larger federally funded study from the National Research Center on English Learning & Achievement (CELA), Ostrowski (2000) spent two years observing the practice of four exemplary teachers who had been described as such on the local, state, and national level. This study, which took place in Dade County, Florida, included two teachers

from an innovative inner city high school and two teachers from a suburban, middle-class middle school. Ostrowski found commonalities in these teachers' thinking and practice about topic relevance. Topic relevance included opportunities for students to articulate thoughts and ideas as they related to the topic being studied, activities connected to English language arts, other disciplines, and a broader world context, and accomplishing of meaningful tasks. English language arts researcher Judith Langer (2001), who oversaw and conducted the CELA research, incorporated topic relevance into her conceptualization of what she termed of "high literacy". High literacy is an instruction that includes a teacher's ability to align particular language, content, and reasoning to specific situations and disciplines (Langer, 2001).

Mosely, Ramsey, and Ruff's (2004) research on pre-service teachers' field experiences and reflection sessions in elementary science indicated that as teachers engage in actual field experiences and reflection sessions, they learn strategies for "clarifying, confronting, and expanding [their] ideas, beliefs and values about science teaching and learning as well as expanding [their] ideas, beliefs and values about teaching" (p. 11). The study, which included 55 student teacher participants, suggested that teacher enthusiasm for science was not an adequate substitute for actual teacher preparation. In regard to topic relevance, study findings indicated that providing students with choice of science topics was central to making scientific investigation relevant to student learning. Additionally, findings suggested that providing opportunities for science topic exploration and sharing of students' own thinking processes and findings contributed to making a topic relevant in maximizing student learning opportunities.

Boyd and Ikpeze's (2007) study examined the pedagogical approach of using multiple types of text to support students' development of conceptual understandings. The study included one seventh-grade English language arts teacher who had been a teacher for 15 years. Findings indicated a strategic and systematic approach to using multiple types of texts. Examples of these findings included asking a large number of questions after introducing the unit and reading various texts for different purposes in order to explore multiple perspectives and gain in depth knowledge of a historical event and the complex issues of racism, social injustice, and inequality associated with it. This study was limited to the exploration of one aspect of English language arts pedagogical content knowledge. Another limitation to this study is its lack of generalizability due to the inclusion of only one case study participant.

This section of the literature review has provided an overview of the research literature of teachers' pedagogical content knowledge perspectives of knowledge of topic relevance. The final section of the literature review contains a summary of Chapter 2.

Summary

This chapter has reviewed the research literature of (1) researchers' conceptualizations of pedagogical content knowledge, (2) teachers' understanding of how to organize and teach a subject, (3) perceptions of student learning realities (specific learning challenges within a subject area, students' developmental capabilities, and common misconceptions of learning certain topics within a subject area), (4) learning realities of today's learner, and (5) knowledge of relevance of topics to include in the curriculum. The discussion of research that extends beyond high school English teachers' articulation of pedagogical content knowledge was included to provide a more comprehensive and in-depth

view of the existing research of pedagogical content knowledge perspectives. Much of the current research literature on English language arts teachers' pedagogical content knowledge articulation has focused on pre-service and elementary-level teachers, with few studies examining the development of pedagogical content knowledge at the secondary level. Of the studies that do exist, many are case study examinations of a few teachers and thus have limited generalizability. Findings suggest that teachers fail to articulate literacy beyond the basic traditional categories of text-based reading and writing. Additionally, implications for research include an examination of teacher education and training programs that consider effective ways to support teachers in the content and delivery of English language arts pedagogical knowledge, and to develop tools that study content knowledge for teaching, content knowledge development, and the contribution of content knowledge in improving instruction and student achievement. Other future research includes a need to investigate the pedagogical content knowledge of experienced teachers as compared to those with little or no teaching experience. The next chapter, Chapter III, will describe the methodology for the study.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this study was to explore experienced secondary English language arts teachers' perspectives of pedagogical content knowledge and approaches to instruction. The focus of this research was experienced secondary English teachers of grades 9-12. This study utilized Shulman's (1986, 1987) construct of pedagogical content knowledge. Pedagogical content knowledge is the way in which teachers conceptualize and approach both content and pedagogy in relation to their subject-specific practice. Using the construct of pedagogical content knowledge in this study provided a framework for examining experienced teachers' conceptualizations of subject-specific knowledge, skills, and instructional approaches. This study sought to categorize secondary English language arts pedagogical content knowledge through the examination of these teacher perspectives.

This chapter is organized into 11 sections. They are as follows: research questions, research design, population and sample, procedures, protection of human subjects, instrumentation, pilot study, data analysis, researcher's qualifications, validity and limitations, and significance.

Research Questions

This study investigated four essential questions:

1. In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of how to teach the subject of English language arts in ways that maximize student learning?
2. In what ways do experienced secondary English language arts teachers articulate

their pedagogical content knowledge of learners?

3. In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of curricular organization?
4. In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of which topics are most relevant to include in the curriculum?

Research Design

This study used a qualitative research design. A qualitative research approach is one that seeks to gain understanding by including a holistic view of a specific context. Qualitative research attempts to understand perceptions of reality by analyzing the individual and shows how, through individual experiences, people construct perspectives of the world that influence their actions (Bogdan & Biklen, 1992; Krathwhol, 1998). This study used an interview protocol to gather and analyze data. Interviews were used because they provided an effective method of gathering in-depth data from a greater number of study participants. For example, using case studies that include observation, videotaped teaching sessions, and interviews could provide meaningful data on teachers' content knowledge and subject-specific approaches to instruction. However, relying primarily on these data would limit the amount of teacher participants for this study as well as the ability to generalize findings. For example, a recent study on science teachers' pedagogical content knowledge that used case studies included only four teacher participants (Lee, 2005). This study included 12 participants in order to gather in-depth data from a greater number of study participants. Additionally, examining more than a few teacher perspectives provided the researcher of this study to note preliminary generalizations, such as potential patterns

and themes that exist in how secondary English language arts teachers articulate pedagogical content knowledge.

Population and Sample

Candidates selected to participate in this study included 12 experienced secondary English language arts teachers who live and teach in the San Francisco Bay Area and southern California. For the purposes of this study, experienced secondary English language arts teachers were defined as teachers of grades 9-12. Additionally, this definition included that teachers be in compliance with the No Child Left Behind Act (NCLB) (2001) as an NCLB highly-qualified secondary English language arts teacher. NCLB defines a highly-qualified teacher as having a bachelor's degree, state teaching credential, and demonstration of subject-matter competence in the core subjects that he or she teaches.

In the state of California, subject-matter competence at the secondary level can be demonstrated in several ways. Teachers may pass a California Commission on Teaching Commission (CCTC) approved subject matter examination. They may also complete one of many coursework options. These options include successful completion of a CCTC approved subject matter program, a major or major equivalent in the subject area being taught (an equivalent requires at least 32 semester units), or a graduate degree in the subject area being taught.

Study participants were recruited through direct referrals from directors of eight California Beginning Teacher Support and Assessment (BTSA) programs. BTSA programs served as a useful source for obtaining study participants because applicants are required to have a substantial level of teaching expertise. BTSA programs then further screen potential teacher mentors through a formal application process. This application review process helps

BTSA directors select the qualified mentors to support beginning teachers.

The researcher obtained referrals in two ways: (1) in-person conversations with BTSA directors and (2) written email letters to BTSA directors. These BTSA directors had substantial databases of experienced teachers who served as BTSA mentors to beginning teachers. Some of the teachers who participated in this study were no longer teaching 100% of the time due to their responsibilities as mentors to beginning teachers.

All potential study participants were identified as highly effective teachers. For the purposes of this study, highly effective teachers were defined as those who employed Zemelman, Daniels, and Hyde's (2005) 13 principles of best practice. During the referral request process, the researcher asked each BTSA director to explain the reasons why he or she referred each potential participant. The researcher then compared each BTSA director's rationale for referring each participant with these criteria of being a highly effective teacher. Those who met the criteria were extended an invitation to participate in the study. The researcher also requested contact information from each BTSA director for these potential participants. In some cases, the BTSA directors forwarded the email letter referral request to the participants they recommended so that the potential participants could contact the researcher directly.

The researcher chose to select participants from the BTSA mentor population for this study due to her three years of professional expertise of having been a director of a state-approved BTSA program. As the researcher had already established relationships with many other local BTSA program directors, this population seemed the most accessible from which to draw study participants. The researcher did extend beyond the *San Francisco Bay Area* BTSA programs to locate one study participant from southern California. Data were

collected from the study participants through one-hour, in-person interviews.

Table 2 contains a brief overview of the 12 study participants. All of the names the researcher has assigned to them are pseudonyms. Table 2 contains a demographic overview of the study participants that highlights each participant's highest level of education and number of years of teaching experience. Each study participant is also an experienced BTSA mentor. Following Table 2 is a brief biographical description of each study participant.

Table 2

Demographic Overview of Participants

Participant*	Highest Education	Years of Experience
Amy	BA	17
Bridget	MA	12
Ginger	MA	11
Jackie	MA	14
Jill	BA	12
Joyce	BA	10
Kim	BA	35
Lisa	MA	20
Lora	MA	20
Meredith	MA	9
Melanie	MA	12
Tim	BA	10

*Description of Study Participants**Amy*

Amy taught high school English language arts for 15 years before stepping out of the classroom two years. She earned her teaching credential in the San Francisco East Bay. Her teaching career has consisted of teaching in public high schools in the San Francisco Bay Area. Currently, Amy is a full-time mentor to beginning teachers.

Bridget

Bridget has been a public high school English language arts teacher for 12 years. She earned her undergraduate degree in English from a mid-western university before relocating to the San Francisco Bay Area, where she earned her teaching credential. Bridget currently lives and teaches in southern California. In addition to her teaching responsibilities, Bridget mentors five high school English teachers, and occasionally co-teaches with them.

Ginger

Ginger has been teaching high school English language arts for 11 years. She earned her undergraduate degree in English from a private liberal arts college in the San Francisco Bay Area, then completed a teacher credential and master's program at a private San Francisco Bay Area university. Ginger has spent her entire career teaching at the same Bay Area public high school. Ginger currently mentors five teachers in addition to her other teaching responsibilities.

Jackie

Jackie has been teaching high school English language arts for 14 years. Jackie attended a large public university near Sacramento, where she earned an undergraduate degree in English and Economics. She obtained her teaching credential at a San Francisco Bay Area public university, and also has a master's degree in Composition from another San

Francisco Bay area public university. Currently, Jackie teaches at a public high school in the San Francisco East Bay. Though an experienced mentor, Jackie currently is not mentoring beginning teachers.

Jill

Jill taught high school English language arts for eight years before transitioning into a Teacher on Special Assignment position that entails working for the school district's English Language Development (ELD) center. She earned a bachelor's degree in English, her teaching credential, and her Cross-cultural Language Acquisition Development (CLAD) at a public university located in Northern California. Her current position for the ELD center is located on a high school campus in the San Francisco East Bay. Though she is an experienced mentor, Jill currently is not mentoring beginning teachers.

Joyce

Joyce has been teaching high school English for 10 years. Though originally from the East Coast, she moved to the San Francisco Bay Area and she earned her bachelor's degree in English and teaching credential at a local public university. In addition to her teaching responsibilities, Joyce mentors beginning teachers and also is a member of her school district's Beginning Teacher Support and Assessment (BTSA) leadership team.

Kim

Kim is a recently retired English language arts teacher who taught for 35 years. She earned her undergraduate degree and teaching credential in Louisiana, then moved to California and fulfilled the state's requirements at that time to earn her California teaching credential. Currently, she is a full-time mentor to beginning teachers in the San Francisco North Bay.

Lora

Lora taught high school English for 20 years before transitioning out of the classroom 10 years ago to mentor beginning teachers. She earned her undergraduate degree in English at a public San Francisco Bay Area university, and began her high school English teaching career immediately after earning her degree. After seven years of teaching at two Bay Area Catholic high schools, Lora earned her teaching credential, and eventually returned to the high school English classroom, this time at a local public school. Currently, she is a full-time mentor to beginning teachers and also oversees a San Francisco Bay Area state-approved BTSA program.

Lisa

Lisa has been teaching high school English language arts for 20 years. She earned a bachelor's degree in psychology, a master's in composition, and a California teaching credential in English and Social Science at a public university located in the San Francisco Bay Area. She also is a teacher consultant for the Bay Area Writing Project, a writing program located at the University of California at Berkeley that collaborates with schools to support the improvement of student writing abilities by providing professional development support to teachers. Lisa currently teaches at a public high school in the San Francisco East Bay, and previously taught in the in San Joaquin County, which is located in the Central Valley. In addition to her teaching responsibilities, Lisa mentors beginning teachers.

Meredith

Meredith has been teaching high school English for nine years. Meredith has a bachelor's degree in English with an emphasis on Secondary Education. She earned her degree at a public university located in the San Francisco Bay Area in an undergraduate

program that was designed specifically for students who plan to become teachers. After earning her bachelor's degree and teaching credential from this university, Meredith began teaching at a public high school in the San Francisco North Bay. Currently, she also mentors two beginning teachers, who are both members of her school's English department.

Melanie

Melanie has been teaching high school English language arts for 12 years. Melanie earned her bachelor's degree in Interdisciplinary Humanities and her English and CLAD teaching credentials at a public university located in the San Francisco Bay Area. For the past several years, she has been teaching at the same public high school, located in the San Francisco East Bay. Previous to teaching at this school, Melanie taught at a San Francisco Bay Area inner city public high school. In addition to mentoring high school English teachers, Melanie currently is mentoring a social studies teacher.

Tim

Tim has been a high school English language arts teacher for 10 years. Tim earned his undergraduate degree in Organizational Communication at a public university located in the Central Valley. He earned his English teaching credential from a private San Francisco Bay Area university. Currently, he teaches a high school journalism class at a public high school in the East Bay, mentors eight beginning teachers, and organizes professional development programs.

Protection of Human Subjects

As the study involved human subjects, the researcher received approval to conduct this study from the University of San Francisco's Institutional Review Board for the Protection of Human Subjects. All research was governed by the ethical principles and standards as set out

by the American Psychological Association (2001). During the participant recruitment process, the researcher informed all participants in writing of the purpose of the study. All study participants signed a consent form (Appendix A) prior to the commencement of the research study. Subjects remained anonymous, and each participant was assigned a pseudonym. Participants were informed, in writing, of the proposed expectations of the study, as well as their right to withdraw from the study at any time. Interviews were digitally recorded and stored in password-protected electronic files. Interview transcriptions were coded electronically and stored in a password-protected electronic file folder accessible only to the researcher.

Instrumentation

The data collection methodology for study was a standardized open-ended interview protocol that required the interviewer to adhere to a specific script (Patton, 2001). The researcher chose this interview format because it was the most structured of the qualitative interviewing techniques that reduced potential bias when the interviewer did not have extensive interviewing experience. Additionally, this interview format reduced potential bias during data analysis when comparing interviewees' responses to the same question(s). The interview protocol (Appendix B) was developed to include questions that were both general and specific, beginning with more general questions and gradually moving to specific questions. The interview protocol was developed in this manner to put the interviewee at ease at the beginning of the interview session with more general questions. More detailed questions included probing questions were designed to elicit detailed responses from the interviewee.

The interview protocol included 16 questions. With the exception of questions one

and two, which were general questions, each question was aligned to at least one of Zemelman, Daniels, and Hyde's (2005) 13 Principles of Best Practice. Each question also was crafted to reflect at least one pedagogical content knowledge element (see Appendix C). The questions were of the researcher's own design and were formulated to elicit specific information about how teachers thought about and approached the discipline of English language arts. Each question was constructed to ensure that all interviewees were asked the same questions in the same order to ensure consistency, to use the interviewing time efficiently, and to help facilitate data analysis. The interview questions were ordered from general to specific according to the following categories: general background, general pedagogical content knowledge, and specific pedagogical content knowledge. The questions under each of these headings are explained below.

General Questions

Questions one and two were general questions that elicited background and demographic information, such as educational background and years of teaching experience.

English Language Arts Pedagogical Content Knowledge

Questions three through five were specific in that they required the interviewee to identify particular areas of strength and challenge, but were still general enough for the teacher to select examples of strengths and challenges across English language arts as a discipline. Questions six and seven were questions designed to elicit more detailed information about planning and teaching a lesson, how teachers gauged whether their instruction was successful, and teachers' thought processes of selecting essential topics to include in their curriculum. These questions were more specific but are still general to the

discipline of English language arts. Questions eight and nine included pedagogical content knowledge approaches and rationale for specific strategies used for teaching reading and writing specifically. Questions ten through sixteen sought to make explicit the learner-centered nature of teachers' development of specific English language arts instructional approaches. With the exception of questions one, two, and three, all of the interview questions were aligned to the four elements of pedagogical content knowledge identified by Wilson, Shulman, and Richert (1987). Additionally, these questions corresponded to Zemelman, Daniels, and Hyde's (2005) 13 Principles of Best Practice.

Procedures

The BTSA director provided contact information for potential participants in one of two ways: (1) providing the researcher with the potential participant's email address or (2) forwarding the researcher's email letter referral request to the potential participants so that they could initiate contact with the researcher directly. The researcher then contacted and corresponded with each possible participant via email to request his or her participation in the study. In this email, all possible participants received an electronic attachment that included the consent letter (Appendix A). The consent letter informed all participants in writing of the purpose of the proposed study. All participants were informed, in writing, of the proposed expectations of the study as well as their right to withdraw from the study at any time. These expectations and rights were also included in the consent letter. Upon receiving written consent from each participant via email, the researcher then emailed the interview questions (Appendix B) to each study participant so that he or she could review the questions before the actual interview took place.

The researcher used member checking, (Creswell, 2006) by sending the interview transcript to each corresponding study participant via U.S. mail. This provided each participant with the opportunity to review and verify the accuracy of the transcript of his or her interview. Additionally, in the event that the participant wished to elaborate on his or her responses to the interview questions, the participant had the opportunity to elaborate further on his or her responses. None of participants included additional elaboration on responses to the interview questions.

Pilot Study

A pilot study of three secondary English language arts teachers was conducted in January and early February before the actual study took place. The first purpose for conducting a pilot study was to test out relevancy of the interview questions and eliminate or reframe questions as needed. The second purpose was to determine whether the interview questions could be answered within the one-hour interview timeframe. The third purpose was for the researcher to refine her skills as an interviewer. The pilot study included three teachers. No questions were eliminated or reframed. All three pilot interviews were successfully completed within the one-hour interview timeframe.

Data Analysis

Qualitative data analysis requires the researcher to make meaning from large quantities of raw data, which involves “reducing the volume of raw information, sifting trivia from significance, identifying...patterns, and constructing a framework for communicating the essence of what the data reveal” (Patton, 2001, p. 432). This study used grounded theory (Glaser, 2001) to analyze and code these data. Grounded theory refers to a process of generating theory that helps control bias by requiring specific procedures (Patton, 1990).

Grounded theory involves three stages of data coding: open coding, axial coding, and selective coding (Strauss & Corbin, 1998). This study analyzed the data in three phases. The first phase was to group and use open coding. Open coding is the process of identifying, naming, classifying, and categorizing information. During this phase, the researcher read through each transcript to identify and categorize information. The researcher searched for repeated words, phrases, and expression of ideas. The second phase of data analysis used axial coding to further organize and analyze the data. Axial coding is the process of focusing on reviewing preliminary concepts and themes identified during the open coding. Axial coding also involves looking for categories relating to one another that can be grouped together. During this phase, the researcher reviewed each transcript again and further organized and analyzed the data according to emerging themes, such as multiple access points and making the invisible visible. The third phase used selective coding. Selective coding is the process of further refining the data to one central category. The selective coding phase used deductive reasoning to carefully examine the data categories and generate hypotheses about the relationships between concepts and themes in order to relate other relevant data to this central category. During this phase the researcher organized and analyzed the emergent themes in the data according to each research question.

After completing these three manual phases of coding to organize and analyze the data, the researcher used the qualitative research software NVivo 8 as a tool for further coding and data analysis. NVivo 8 is a software tool by QSR International that classifies, sorts, and arranges information, and is considered the world's leading developer of qualitative research software. The researcher imported each transcript into Nvivo 8 and created a separate folder for each transcript. She then reanalyzed each individual transcript

and assigned codes to the text according to the data categories that the researcher had refined during the selective coding process. Some passages fell into more than one category and thus were assigned multiple codes. As the researcher analyzed the data, she further modified the codes accordingly.

Qualifications of the Researcher

The researcher has 13 years of secondary English language arts education experience. In addition to her eight years of high school teaching experience, areas of expertise have included developing and implementing interdisciplinary English language arts and social studies curriculum for high school students, English language arts curriculum development, the development and implementation of a state-approved teacher induction program across four San Francisco Bay Area charter high schools, mentorship of beginning middle and high school teachers, and the development and implementation of project-based learning curriculum across multiple disciplines. The researcher's years of high school teaching expertise further qualified her to conduct this study because it provided her with the knowledge and skill of asking probing questions during the interview process to obtain relevant data.

The researcher became interested in English language arts teachers' perspectives of pedagogical content knowledge, skills, and approaches to practice for a variety of reasons. First, as a teacher of English language arts, she has engaged in multiple professional development trainings and sessions that are dedicated to research-based best practices. Among these are practices such as Wiggins and McTighe's (2005) work on instructional design, WestEd's Strategic Literacy Initiative, a metacognitive approach to teaching reading across multiple disciplines, and professional development centered on national efforts to

restructure American high schools. These have all been extremely meaningful in shaping her own perspectives in regard to teaching secondary-level English language arts.

Additionally, much of the researcher's recent work mentoring beginning teachers has centered on California's six Standards for the Teaching Profession (California Board of Education, 1997). These standards are generalized to all teachers, regardless of grade level or discipline, and include such categories as planning instruction and engaging and supporting all students in learning. While she found these standards to be a concrete way to support beginning teachers in setting and achieving specific teaching and learning goals, thinking about these generalized standards for teaching propelled her into exploring in more detail the existing research of the development of subject-specific knowledge, skills, and approaches to teaching practice.

Finally, federal legislation has left out of its definition of highly-qualified teaching any mention of specific knowledge, skills, and implementation of teaching strategies beyond the bare essentials of content test scores and state teaching certification. While having a teaching credential certainly assumes teacher preparation that addresses knowledge, skills, and instructional implementation, the quality and focus of teacher preparation programs varies considerably from institution to institution and state to state. Furthermore, some teacher candidates are now electing alternative pathways to credentialing, such as teacher intern programs. Many of these programs place teachers immediately in the classroom with supplemental evening coursework and, as these programs vary also in focus and quality, it is difficult to determine the knowledge, skills, and approaches teacher candidates are learning and applying to their classrooms to support student learning.

Validity and Limitations

There were several limitations to the proposed research study. With the inclusion of 12 teachers, the participant size for this study was relatively small and thus may not be generalizable to all secondary English language arts teachers. Second, qualitative studies pose a threat of researcher bias. The researcher took precautions to prevent researcher bias by using grounded theory (Glaser, 2001), which includes engaging in rigorous and systematic data collection and analysis procedures, as described above. To address possible bias, in addition to the researcher's own manual organization and analysis of the data, this study used the qualitative research software NVivo 8 to classify, sort, arrange, and analyze data.

Summary

This chapter focused on the methodology, organization, and procedures of the research study. Chapter IV reports the findings of the 12 study participants' articulation of the following four aspects of pedagogical content knowledge: (1) how to teach a subject area in ways that maximized student learning, (2) knowledge of learners, (3) curricular organization, and (4) the most relevant topics to include in the curriculum.

CHAPTER IV

RESULTS

Overview of Findings

The findings presented in Chapter IV summarize the findings of how highly effective high school English language arts teachers articulated their pedagogical content knowledge of (1) how to teach a subject area in ways that maximized student learning, (2) learners, (3) curricular organization, and (4) the most relevant topics to include in the curriculum. These results were based on 12 interviews with highly effective high school English language arts teachers from the San Francisco Bay Area and southern California.

Summary of Findings

Pedagogical content knowledge is defined as the intersection of the knowledge domains of subject matter and general pedagogical knowledge. In this combined knowledge of subject matter and pedagogical approach, an effective teacher would understand and interpret the subject matter, determine which topics were most relevant to include in the curriculum, decide the most appropriate ways in which organize these relevant topics, and then determine various strategies for representing that content in a way that would be accessible to the teacher's learners (Shulman, 1986; Wilson, Shulman, & Richert, 1987). For the first research question, *In what ways did experienced secondary English language arts teachers articulate their pedagogical content knowledge of how to teach the subject of English language arts in ways that maximized student learning?*, the participants of this study spoke more generally about their English language arts content knowledge. According to Shulman (1987), English language arts teachers' subject matter knowledge would include

topics such as “English and American prose and poetry, written and spoken language use and comprehension, and grammar...[and] the critical literature that applies to particular novels or epics that are under discussion in class (p. 10)”. Rather than articulate an in-depth understanding of these types of sub-categories that comprise English language arts as a discipline, study participants chose instead to focus primarily on the discussion of various ways in which they might teach a particular English language arts concept. For example, in their discussion of literary devices, such as metaphor and personification, study participants discussed strategies they would implement to teach the concept, but did not articulate their own in-depth understanding of these literary devices as a part of their subject matter knowledge.

For the second research question, *In what ways did experienced secondary English language arts teachers articulate their pedagogical content knowledge of learners?*, study participants also articulated their pedagogical content knowledge of the learner in terms of specific strategies they used to support their students’ academic development. Pedagogical content knowledge of the learner includes an understanding of students’ specific learning challenges within a particular subject, learning development levels, overall capabilities, and possible misconceptions of learning certain topics within a subject area (Wilson, Shulman, & Richert, 1987). According to Shulman (1987), pedagogical content knowledge of the learner involves “the capacity of a teacher to transform the content knowledge he or she possesses into forms that are pedagogically powerful and yet adaptive to the variations in ability and background presented by the students (p. 15).” In this study, participants identified specific pedagogical strategies they implemented in representing their content knowledge to address

students' variations of ability, development, and background. For example, participants discussed making personal connections to students' life experiences as a way of representing course content to increase students' access to a specific concept. One such example of this was Jill, who described teaching the concept of topic sentences by comparing topic sentences to film previews students had seen. Other examples of strategies teachers implemented to support student learning included assessments, flexible grouping, visual reinforcements, collaboration, and modifications. Participants also discussed teaching content in ways that were relevant to students' lives.

For the third research question, *In what ways did experienced secondary English language arts teachers articulate their pedagogical content knowledge of curricular organization?*, study participants articulated their pedagogical content knowledge of curricular organization by discussing ways in which they organized units and individual lessons. Curricular organization is an understanding of the various ways in which to organize the teaching of a discipline (Wilson, Shulman, & Richert, 1986). In secondary English language arts, for example, a teacher might organize his or her curriculum according to various genres of literature, and in doing so, might arrange various types of reading, writing, listening, and speaking activities around this literature. Some of the study participants did discuss curricular organization in terms of how they would organize certain aspects of their curriculum around specific themes and literary texts; however, most of the study participants chose to articulate curricular organization of English language arts according to the structure they would use to plan a unit or lesson, rather than by describing the ways in which they would organize specific aspects of the English language arts curriculum. Examples of these unit and lesson structures included strategies such as backward mapping, into, through, and

beyond, and organizing the English language arts curriculum around the promotion of critical thinking skills.

For the fourth research question, *In what ways did experienced secondary English language arts teachers articulate their pedagogical content knowledge of which topics were most relevant to include in the curriculum?*, teachers articulated their pedagogical content knowledge of topic relevance by identifying specific topics they felt were essential to include in their English language arts classroom instruction. These included writing, vocabulary, and reading. Almost all of study participants failed to articulate a specific rationale, however, for including writing and vocabulary as relevant topics. For the topic of reading, participants did provide a rationale for the reading topics they chose. This included explanations such as incorporating an independent reading component into the class to promote students' exploration of texts for the purposes of interest and enjoyment, exposing students to significant pieces of literature that were not covered in the existing curriculum, and using texts that supported students' access to the skills, state standards, and the context of the reading selections.

The remainder of Chapter IV is organized according to the following four research questions:

1. In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of how to teach the subject of English language arts in ways that maximize student learning?
2. In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of learners?
3. In what ways do experienced secondary English language arts teachers articulate

their pedagogical content knowledge of curricular organization?

4. In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of which topics are most relevant to include in the curriculum?

Each of the following sections will provide additional details about how each of the teachers articulated their pedagogical content knowledge according to each research question.

Research Question One

In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of how to teach the subject of English language arts in ways that maximize student learning? According to Shulman (1987), content knowledge is comprised of a collection of specific knowledge within a subject area. The participants of this study identified general knowledge aspects of high school English language arts content, such as writing, listening, speaking, and critical thinking. In regard to articulating how to teach these aspects of English language arts in ways that maximized student learning, however, participants of this study articulated their content knowledge primarily in the identification of teaching strategies they used to teach their content in ways that they felt maximized student learning. This is in contrast to a more theoretical approach to their articulation of their knowledge of the subject of high school English language arts. For example, though many study participants referenced teaching literature, they did not articulate an understanding of their own knowledge of literature.

The study participants did make general statements that reflected an understanding of

their subject matter. For example, when discussing the teaching of writing, some of the study participants articulated a need for students to learn how to write for various audiences (writing an essay, letter, personal narrative). Rather than provide a rationale for why this might be important or how this writing skill might relate to other aspects of the English language arts curriculum, study participants focused on strategies they would implement to support student-learning development of a particular concept or skill.

Additionally, the participants articulated subject matter knowledge in terms of which topics they felt were most relevant to include in the curriculum. For example, all of the teachers identified reading and writing as essential components of the high school English language arts curriculum. However, few teachers described in any detail what about reading and writing specifically they felt the students needed to know and why. Those participants who did articulate specific aspects of reading or writing provided more generalized details to describe what, specifically, they considered essential for students' reading and writing development. Responses included statements such as students gaining an "appreciation of literature" or the development of a thesis statement as one of the many aspects of essay writing. These articulations did not include specific details that described the teacher's notion of what constituted an appreciation of literature, or a description of what the teacher felt were the essential aspects of essay writing. Additionally, these articulations did not provide a comprehensive description of why an appreciation of literature or essay writing would be essential to include in the curriculum.

In articulating their pedagogical content knowledge of subject matter, the participants

of this study focused primarily on the actual teaching strategies they used to represent the subject matter and their rationales for using these strategies in ways that maximized student learning, in contrast to a more theoretical approach to their articulation of high school English language arts pedagogical content knowledge. In regard to teaching content, one prevalent theme emerged from the data: the strategy of making the invisible visible by taking English language arts concepts and skills that were not explicit to students and making them more readily accessible to the learner. Within making the invisible visible, peer and self assessments, examples, models, and physical activities emerged as sub-themes. The remainder of this section highlights these strategies of teachers' pedagogical content knowledge of subject matter. Table 3 lists the number of participant responses per theme. Each sub-theme is discussed in the same order as Table 3.

Making the Invisible Visible

The teachers discussed the importance of providing a structure to ensure that students had the necessary knowledge for completing a learning task, and various ways in which teachers could make the needed skills visible to students whose learning levels and individual learning processes varied. Tim, a high school English and journalism teacher, defined it in this way:

Throughout the topic, being able to check for understanding and then also ensuring that when students do leave, they have the proper knowledge to complete the individual task, so a lot of times we'll do the I do, you do, we do, where there may be some type of activity within the lesson where I'll show them my process...and so we do that a lot with the lesson too, and then we'll do an activity together, and then hopefully they can do it on their own (Interviews, 2009, p. 128).

Table 3

Pedagogical Content Knowledge Themes and Sub-Themes as Identified by Interviewees

<u>Theme</u>	<u>No. of Interviewees Identifying Theme</u>
<i>Subject-Specific</i>	
Making the invisible visible	
Peer and self assessments	9
Examples	8
Models	8
Physical activities	7
<i>Learner</i>	
Personal connections	9
Multiple access points	
Assessments	12
Flexible grouping	9
Visual reinforcements	9
Collaboration	7
Modifications	5
Real-life relevancy	7
<i>Curricular Organization</i>	
Unit and lesson planning	12
Critical thinking	11
<i>Topic Relevance</i>	
Writing	11
Vocabulary	8
Reading	7
School Context	6

Teachers described making the invisible visible as a structure that involved a tangible teaching and learning process. These tangible examples of making the invisible visible

included implementing the use of examples, models, physical classroom activities, and peer and self assessments as ways of providing explicit instruction as well as scaffolding instruction to support students in moving toward their own learning independence.

These findings are in alignment with research that suggests that real understanding extends beyond memorized information and regurgitation of facts to the kinds of thinking that facilitate the construction of ideas, and deep understanding of complex and abstract concepts that are essential for today's learner to function successfully in modern society (Zemelman, Daniels, & Hyde, 2005). These findings also align with research that suggests that teachers' thinking about teaching and learning is contextualized to specific teaching actions in relation to the topic or content being presented (Eley, 2006). The remainder of this section is organized into four sub-categories of making the invisible visible. These include peer and self assessments, examples, models, and physical activities.

Peer and Self Assessments

The implementation of peer and self-assessment strategies, particularly for the teaching of writing, was a common teaching strategy teachers used to make the writing and revision process visible to students. One approach the teachers used in teaching writing was the implementation of a peer editing or peer critique protocol. The primary focus of this peer strategy implementation was for students to identify strengths and weaknesses in each other's writing. In this way, the students took on responsibility for supporting one another in developing their own critical analysis skills. Some the teachers described this peer process as a collaborative one, as described by Lora:

[The story] was a prototype of *Of Mice and Men*. It was a young boy who...went to school and would become...withdrawn and what happened as a result...and they had to read that, talk together about comparisons between the novel and the short story, and then individually write a minimum of a five-

paragraph essay, doing the comparison, and then they could read each other's essays and correct them. And then that was turned in as the final (Interviews, 2009, p. 70).

In Lora's class, the peer editing and critiquing process involved small group discussion before completing the writing task, followed by a peer process that provided students with immediate feedback regarding their writing skills development. Another example of a collaborative peer critiquing strategy extended beyond the teaching of writing to analyze the structure of a school newspaper. In Tim's journalism class, the peer critique was a group assessment of one common product, the school newspaper that the class produced each month. The class used an inquiry protocol from the California Newspaper Publishers Association as well as newspapers from other high schools in the San Francisco East Bay area to critique each section of their own paper.

For almost all of the teachers, self-assessment strategies involved students interacting with their own writing to assess their strengths, weaknesses, and next steps for improving their skills. Some of the teachers required individual students to read through the teacher's feedback and identify specific actions they could take to improve their writing. In the following excerpt, Ginger described a strategy for having students evaluate their own writing processes:

With the first reading log that I handed back, I gave it to them in class and I gave them time to read it through all the comments, and all the corrections, and the grammar and things like that...and I told them that they could get some gains in points in their score, if they read over all the comments and they wrote down three specific, concrete things that they could do to improve their next log (Interviews, 2009, p. 19).

Ginger's strategy of having students write concrete, specific actions that they could take to improve their next writing assignment is an example of facilitating an opportunity for students to critically analyze their own work. They did so also within the structure of teacher

feedback that explicitly identified some of the students' writing challenges. Then, based on this feedback, students devised a next steps strategy for improving their own writing skills. Meredith called upon students to review of a culmination of their own writing pieces. They then identified the specific writing skills they needed to work on and applied these areas as the focus for their first writing piece of the following semester:

They [the students] have writers' portfolios, and they...record their grades, and then record the comments that I write on their papers. And so I put plus, things you did well, and areas you need to work on. And at the end of the semester, ... I said let's look at all the things you did well, and the areas you still need to work on, and that becomes their focus for their first piece of the second semester, so they're working on conclusions and when they're working and peer editing, they're peer editing their conclusions, or their transitions...so it's not just for the grade and they're done with it. But they look to see the comments that I give them, and then they get to determine like from that, where do I need to spend my time the next time (Interviews, 2009, p. 105).

Melanie's strategy was similar in providing students with written feedback and asking them to assess their areas for improvement, but Melanie connected this process to an actual rubric to make it even more visible for students:

They then need to read their papers again. They need to write comments, they need to go back to the rubric, they need to target and find out what they are doing that matches, and at what level. And they need to reassess their own writing. And then, they look at my comments, and then after, they have to write a reflective paragraph about where they think they're meeting their targets on the rubric, and where they feel they're falling short on the rubric, which area... they have to look at syntax, word choice, purpose for writing, focus, content development, and so they have to address where they are functioning well and where they're hitting their target, and where do they need to develop, and then suggestions of what they're gonna work on for their thesis, how can they possibly develop that area, and then they keep that (Interviews, 2009, p. 122).

Teachers also identified having students set concrete goals as a self-assessment strategy for making their learning processes more visible. This included having students assess their previous English language arts learning experiences, identify their challenges,

and set concrete goals for the semester or year. Some of the teachers also required students to keep writing portfolios to gauge their writing skills progress. Jill described implementing a writing portfolio as a strategy for supporting students in setting, revisiting, and achieving their writing goals:

So I implemented a writing portfolio and...they established what they needed to work on with their writing...what is it about your writing that you want to improve on, and then, as we did our writing pieces throughout the year...I would have the students go back through what they had done so far and how ... they felt they were moving towards success and meeting their goal...when I asked them to establish their writing goals, it had to be something specific. It couldn't just be I want to be a better writer, it had to be something we could measure (Interviews, 2009, p. 42).

These findings are in alignment with research that supports the notion that both collaborative and individual assessment strategies provide students with extensive feedback that informs their learning and overall skills development (Zemelman, Daniels, & Hyde, 2005).

Examples

Most of the teachers talked to some degree about using examples to support student understanding of concepts. One example of this was teaching students about personal bias in a journalism class. The teacher, Tim, wanted students to understand how their own personal biases might affect students' abilities to read a news story objectively versus reading it with the lens of their own personal biases. Additionally, he wanted them to understand the possible biases that an author of a news story might bring to it when writing a news story that is supposed to be objective.

To illustrate this, Tim brought in three or four different news stories that focused on the same event, the event in this case being a recent shooting that took place on New Year's Day of 2009 at a BART station in the San Francisco East Bay. Though each newspaper had reported on the same event, the story was portrayed in different ways in how each author

disclosed and modified the reporting of the same incident. This example illustrates taking an abstract idea, like bias, and making it more tangible for the students because they read and discussed different versions of the same news story and physically saw the differences in how each was reported. Part of the discussion also focused on students approaching each news story version from the possible bias of their own unique life experiences:

Reading a story about a minority who was shot in a BART station, for example, by another minority, who in this case, the BART officer was Jewish, reading that story and looking at it from, are their experiences, are they connected at all with the way they see and interpret the information (Interviews, 2009, p. 130).

Another illustration of using an example to make the invisible visible was described in teachers' discussions of teaching literary symbols. A common thread in the teaching of symbols was to start a lesson, class discussion, or activity with very concrete examples of common symbols, such as a smiley face, stop sign, heart, dove, hawk, or American flag. Some of these teachers also provided visual representations of these symbols. The teachers and students would then discuss what these symbols represented in everyday, modern society. For example, students might discuss how a heart is a representation of love, while a dove might be a representation of peace. Teachers then described ways in which they would scaffold from these simplistic representations of symbols to more complex symbols within the literature they were studying:

I draw a symbol on the board – I draw a smiley face. What does this mean... You know, you have a stop sign, and things like that, and we go on and we take it a step further, and they really get into it. They really get into it. *Gatsby* again. Daisy and Myrtle. So I show them a daisy and I show them a myrtle bush (Interviews, 2009, p. 3).

In the above example, Amy discusses one of her first steps in scaffolding toward more complex symbolism when teaching *The Great Gatsby*, a novel by F. Scott Fitzgerald. Amy

described how she would show students an actual daisy and a myrtle bush as a strategy for having students make connections to physical and personality attributes of the two female protagonists of the novel, Daisy and Myrtle, and the physical characteristics of a real daisy and myrtle bush.

Another example of scaffolding from a simplistic to a more complex understanding of symbols was Ginger's example of assigning students particular symbols before reading *Lord of the Flies*, a novel by William Golding:

I basically had each of the kids assigned a particular symbol in the book, whether it's the conch, or Piggy, or the glasses. And they had a sheet where they just had to keep track of quotes throughout their reading the book that related to their symbol, and then at the end of the book, I had the groups meet. They pooled all of their quotes, they talked about possible meaning with symbol, and then they, together, created a poster that had the meaning of the symbol and a paragraph of explanation, and some quotes to support it. And they presented that to the class (Interviews, 2009, p. 17).

In this instance, Ginger implemented a tangible strategy to move students toward a more complex understanding. She did this by implementing a series of scaffolded tasks, first by introducing the major symbols of the novel, then assigning one symbol to each student to physically track that symbol by recording examples from the reading related to his or her assigned symbol. Ginger then assigned students to groups to share their quotes and discuss possible meaning of their assigned symbol. Finally, students created a visual representation of their assigned symbol that included a synthesized understanding of the symbol in a paragraph, use evidence to support it, and then present it to the class.

Models

Providing students with various instructional models was another common sub-theme in how teachers attempted to make the invisible visible. The use of instructional models provided students with concrete examples of particular English language arts concepts.

Many of the teachers provided various examples of these instructional models. For some teachers, the use of a model meant providing students with a student-generated example of a concept, as Michelle described in her articulation of teaching literary themes:

And then sometimes bringing it to life, like they'll have to create a visual image of a symbol or something...so they'll have to choose a passage with the use of a symbol in the passage, or they'll choose a passage with personification, or they have to choose a passage that reflects a theme...and then the paper usually, it's broken into thirds. They'll have to have the passage, there will be an explanation...they'll have to clearly explain what is a symbol, what does it represent, how is it being used. So in terms of interpretation, and then bring it to life in visual form. So, I'll show them these models...I'll show them a couple that are not so nicely executed and we'll talk about what makes this great, and I have some examples that are average. So I'll show them a different range (Interviews, 2009, p. 116).

Sharing student-generated artifacts such as these with students is one way to provide them with tangible examples of the concepts they are studying. Sharing more than one student-generated model with students additionally provides them with concrete examples of various student skill levels so that they can see that skills mastery is a developmental process.

Another example of using a student-generated model was the use of a student essay to support another student's writing development:

I might provide some frame for writing and use lots of examples of writing, and have students really tear apart those examples and...[if] this student had no transitions, the paper is just a brainstorm of ideas without any smooth transitions, I might take out a past essay that is so perfectly written, that they can see clearly. I do a lot of highlighting and the students have a key for their highlighting where we're looking for transition words...and they take that same key and apply it to their own work...[the student may say] this paper had all pink words in highlighted transitions and I have no pink words on my paper. And that is really great in conferencing, because I'll say, wow, you didn't find any transitions. Review the rubric and say, effective transitions between paragraphs, you know, is a key part of what we're working on (Interviews, 2009, p. 108).

In this example, Meredith described making transitions between ideas, a specific aspect of the writing process, visible to the struggling student. Rather than simply telling the student

that he struggled with transitions between paragraphs or ideas, Meredith implemented a tangible activity in which the student read a student-generated model of an essay, engaged in physically highlighting the transition words in that essay, and then applied those highlighted words as a key for identifying transitions in his own writing. By implementing this strategy, the student engaged in an activity that made the often invisible process in writing of including transition words a visible reality for the student who may not have understood otherwise what was missing from his writing.

For many teachers, models also included visuals, as illustrated in the excerpt below, in which Meredith describes a specific text analysis strategy for Shakespeare's *Romeo and Juliet*:

[Meredith]: We always return to this iceberg theory of what we see, and what we don't see but we know is there. And [this is] my introduction into subtext and reading between the lines. And so, a lot of time when kids are staying literal, and I'm wanting them to dig deeper, I break out...the iceberg. So here's what Juliet says. What does she really mean? Given everything that we know about her character. So they like that. And they remember it, and so it has worked.

I: Do they see a visual of it too?

M: I did. (Interviews, 2009, p. 103).

Meredith used two specific strategies for teaching her students about subtext, which is the implicit or underlying meaning of the text. First, she showed her students a visual of an iceberg. Only the top of the iceberg was visible to the naked eye, while the rest was submerged under water. Meredith used this tangible example as a way to show students the skill of reading between the lines, going beyond the written words on the page, to analyze implied meaning. Second, she used the iceberg example as a direct connection back to the concept of Juliet's dialogue and implied meaning.

Teachers also talked about modeling in terms of actually engaging in a task before having students complete it. A common structure for this teacher modeling included a three-step cycle that involved the following: (1) the teacher completing a task in a visible way (using an overhead projector) for students so they could actually see the teacher's own process, (2) having the whole class complete the task, and (3) having the students complete the task on their own. Jill articulated this process:

I've heard Kate Consolis speak on several different occasions and...she talks a lot about working with English language learners, and one of the things I've always taken back...[to] my classroom from her presentations is...this model of I'm going to do it, then we're going to do it, and then you're going to do it. Just a lot of modeling on my part and then having us as a collective class do it together, and then having the kids do it on their own...doing a lesson on sentences combining, or showing the students the difference between showing versus telling in their writing...the simple versus complex sentences and how you can really change a piece of writing by implementing just a few different stylistic changes here or there (Interviews, 2009, p. 38).

This three-step process provides students with the opportunity first to see what the process of engaging the task might look like through seeing the teacher complete it. The process of engaging in and successfully completing the task becomes even more visible to the students when they attempt the task together as a class. This, in turn, provides the students with more tangible examples before they then attempt the task on their own. These findings on the use of examples and models as ways to make learning processes visible to students support the research that suggests that students build deep understanding as they engage in "complex, carried experiences" that facilitate conceptual learning (Zemelman, Daniels, & Hyde, 2005, p. 15).

Physical Activities

All of the strategies discussed in the two previous sub-sections included some sort of physical activity component. Physical activities have been included in this section as its own

subcategory, however, because a recurring theme in the data was making the invisible visible with strategies in which physical activity was the primary focus. Many of the teachers described physical activities in which their students learned by the act of doing. Melanie articulated this through a strategy for teaching personification:

Okay, which words are being personified? And so I actually go through a process where we like code lines in the poem. They might have to circle words that have been personified...and so for each kind of aspect, and we'll go to the narrator or mood or tone, and I actually have them color code or visually identify, and they have to write and annotate all over the poem. And so we'll really kind of break it down that way...I'll want them to tell me, okay, what is being personified and why is it personification? So then they're looking for part of class discussion within the poem itself (Interviews, 2009, p. 116).

Similar to Meredith's strategy for making transition words visible to students, Melanie made the invisible visible by having students engage in the physical activity of identifying words that were being personified in the text by having students assign these words an actual code in the text, either by circling them or assigning a color code to the words.

Both Amy and Kim recounted strategies that engaged students in a physical activity:

The green light, I actually get a student to stand up and reach out for it. We're reaching for what's out there. What's out there? The light. No, no, what's really out there. And they get it. It's like a dream, a goal, a hope (Interviews, 2009, p. 3).

In this example, Amy described the green light as a literary symbol in *The Great Gatsby*. In the story, Jay Gatsby, the male protagonist, is in love with a married woman, Daisy Buchanan. Gatsby had once courted Daisy; however, at that time of his youth he had no financial prospects. He left the community in which he and Daisy had been raised, and over the next several years, became independently wealthy. One interpretation of Gatsby's acquisition of financial wealth is that he acquired it in order to win Daisy's love. When he

returned home, however, Daisy was married to another man. The green light is mentioned several times throughout the novel and is situated at the end of Daisy's dock (the story mostly takes place on Long Island). There are numerous interpretations of its possible significance, among which include the notion that it represents a dream, a goal, or a hope.

Kim discussed her rationale for implementing a physical activity by stating that the act of doing contributed not only to making the invisible visible, but also to students actually remembering the concepts:

Now, we didn't always have these when I was teaching, but I love post-its...I've got post its all the way through [the book]. And, so every book that we read, I wanted to see these post its, and if they didn't have post its, I would give them a pack. And to celebrate...the use of post its all year, I'd cover a wall with big sheets of paper, and we would celebrate by going up there and sticking all of our post its...and then, we'd go up and then cover this wall with post its. But, what can you write on your post its? And we'd go through all of that, you know, everything we do in English, so, the setting, the characterization, the rising action...that's the kind of stuff that sticks (Interviews, 2009, p. 59).

Another example of a physical activity was to write concepts such as literary themes on chart paper placed around the classroom:

Sometimes I will give them several themes that we're going to be looking for in the book, and then we put those on big chart paper throughout the room, and then as we come across some examples of that, we continue to go back to those themes. So, some are on poster paper or chart paper and then I have the students – as we make discoveries relating to that theme, they jot them, so we have a visual, an ongoing visual dealing with those, which I think is important (Interviews, 2009, p. 40).

These findings align with research that suggests that students learn by the act of doing (Zemelman, Daniels, & Hyde, 2005).

Research Question Two

In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of learners? Pedagogical content knowledge of student learning

includes a teacher's understanding of students' specific learning challenges within a particular subject area, understanding of students' developmental levels and overall capabilities, and knowledge of some misconceptions of learning, such as faulty schema construction (Wilson, Shulman, & Richert, 1987). Though the study participants did reference some of these aspects of knowledge of the learner, they did so by connecting these aspects to specific strategies that they implemented to support their students' learning realities. One example of this was Jackie's identification of theme and topic as challenging concepts for students to learn. However, rather than discuss why she felt these were challenging concepts based on her knowledge of students as learners, she discussed the strategy of making personal connections to students' life experiences in how she chose to teach these concepts to her students in a way that they could then access and understand. Another example was Lora's description of implementing a writing assignment as a pre-assessment for gauging students' learning challenges. The implementation of such a pre-assessment then informed the English language arts topics and skills on which Lora chose to focus in her instruction. Though Lora did identify possible learning challenges students might have based on such a pre-assessment, such as writing and speaking, she did not elaborate on what students' possible developmental levels might be, nor their overall capabilities or misconceptions of learning in relation to these concepts.

The participants of this study articulated their pedagogical content knowledge of learners through the specific ways in which they differentiated their instruction according to the learning needs of their students. These learning needs included factors such as individual and group learning challenges, developmental capabilities, and common misconceptions of

learning for certain English language arts concepts. The remainder of this section highlights these strategies of teachers' pedagogical content knowledge of the learner. These include teaching strategies that (1) make personal connections to students' own lives, (2) create multiple access points for the learner, and (3) provide real-life relevancy for the learner. Table 4 depicts participant responses per theme. Each theme and sub-theme is discussed in the same order as Table 4.

Table 4

Pedagogical Content Knowledge of the Learner Themes and Sub-Themes

Theme/Sub-Theme	No. of Interviewees Identifying Theme
Personal connections	9
Multiple access points	
Assessments	12
Flexible grouping	9
Visual reinforcements	9
Collaboration	7
Modifications	5
Real-life relevancy	7

Personal Connections

All of the teachers who participated in this study discussed the importance of making a personal connection to the student's life experiences, as Kim explained:

But in the standards, they talked about connecting with the individual background, and if you can, you've got them locked, because if they can talk about themselves, if they can get themselves personally invested in it, they are going to become involved in whatever you're doing (Interviews, 2009, p. 58).

The standards Kim referred to in the above excerpt are the California State Teaching Standards for teaching high school level English. Lora described making personal life connections as an aspect of teaching a theme. In this instance, she discussed the theme of parenting in the novel *To Kill a Mockingbird*, by Harper Lee, a text that often is taught at the ninth grade level:

So we did, I think some reflection came when we did the thematic work in the literature, where mostly my goal was to have them personalize and connect it to their own life. So it's awfully hard to talk about, say, *To Kill a Mockingbird*, and the issues of parenting in *To Kill a Mockingbird* for an adolescent student, and not have them make connections with what's going on with themselves (Interviews, 2009 p. 72).

Another example of making a personal connection to students' own lives was teachers' use of a framework that students were familiar with in their own daily lives for teaching a writing concept. In the following example, Jackie discussed using the structure of a movie preview as a strategy for teaching topic sentences:

I think a hard time for kids is theme and topic...and I always teach theme as what is it that the author or writer wants you to take away with you...so I talk a lot about that. When you go home from a movie, what do you take away...I don't want to know who killed who and who made out with who, but at the end of the movie, you could summarize and say, what were you supposed to feel when you were done, or what were you supposed to know...and then we talk a lot about movie previews and...what a topic sentence is. Your topic sentence, the beginning of your paragraph, is the preview. It's [going to] tell people what it's about, what your attitude is, and where you're going...so I use a lot of analogy...from the movies, because...there's some parallels there, at least for the writing process for me (Interviews, 2009, p. 27).

Kim depicted another example of making a connection to another structure that students were familiar with in their everyday lives, that of family:

Kids can't see [history], it's too abstract...so I would say, now look at me, and then my mother...my mother, which would be your grandmother, was born in 1910, now that's almost the turn of the twentieth century. Do you see that connection? So, my mother was born almost at the turn of the 1900's, and then here I am, and now we're into the 2000's, so they have to see it...if they don't get

a visual image in your English class of what you're doing, they have to see it, so you have to bring it to their attention... then you have to connect with them personally, and then you have to tell them why there's any value to it (Interviews, 2009, p. 60).

Another way that all of the teachers made personal connections to students was to incorporate personal choice within the overall structure of their curriculum. In most cases, the teachers used personal choice strategically by imposing concrete parameters on personal choice in how they approached the various topics they taught. Some examples of personal choice included providing students with project assessment topics that aligned to their personal interests, as Meredith depicted below:

I think choice in the classroom is really important...when students have opportunities for choice...they're able to really capture their personal interests. So, for *Romeo and Juliet* we're writing the essay, but they also have a choice project, where they're looking at fashion design. I was trying to keep in mind the students in the room, and what I know their interests are...so they [also] have an option to do a children's book, a children's story of *Romeo and Juliet*, but really I'm looking at not only comprehension, but analysis of conflict and theme and bringing that all together (Interviews, 2009, p.0105).

Other examples of incorporating personal choice included student-generated discussion questions, student-generated journal and essay writing topics, independent reading texts, and literature circle or fishbowl topic discussions. In addition to using personal choice as a strategy for personalizing the teaching topics and concepts that teachers felt were essential for student mastery of the course material, teachers also implemented personal choice as a strategy for teaching their students how to become responsible for their own learning as Melanie described:

I don't create discussion questions for every single chapter, but I will come up with some for a section or quarter of the novel. And I also have them come up with some of their own. So they have to generate their own questions for class discussion or work with a partner...so I think that's the teaching and learning process. It's sort of transferring power over to them, where they're making more choices (Interviews, 2009, p. 113).

Another reason teachers used personal choice was as a strategy for students to develop the skill of higher-order thinking, as Joyce articulated:

But then, really moving towards that higher level of thinking...and so, really working in those kinds of questions on a daily basis...they're not things that are restricted to higher levels of thinking, and something that all students should do in order synthesize and integrate new information or ideas...looking at ways to have students not only answer those questions, but then start to ask some of themselves and of each other. And so, for example, in the learning, the reading log that my students do on their outside reading, one of the things that they do every day is ask and answer one of those kinds of questions (Interviews, 2009, p. 50).

Teachers also discussed implementing personal choice as a motivational strategy to encourage student skill mastery. In the following example, Tim discussed a student in his journalism class who had recently lost a friend to a tragic accident, and her emotional connection to her critical thinking and writing skills development regarding what constituted a “good” news story:

She wanted to write an article about her friend... and...it fit all of our criteria in terms of choosing her for a story, but when she decided to do the article...it not only something that she needed to do for task, but there was attached emotional meaning for her about the topic for the story. So, she developed her own idea for the story, and then moving toward understanding and mastering the concepts, she really took it upon herself in this case to look at every single one of the ... because she had a personal interest in the story, it was easy, final tangible product (Interviews, 2009, p. 135).

Making personal connections to students' life experiences supports the research that indicates that student-centered curriculum addresses the real, whole lives of students by recognizing and validating their own individual interests and frameworks of experience (Zemelman, Daniels, & Hyde, 2005). This study's findings also support research that indicates teachers are concerned with creating connected learning activities and experiences for their students (Bell, 2007). These findings also align with research that suggests that

aligning curriculum to students' interests addresses the real, whole lives of students by recognizing and validating their own individual interests and frameworks of experience (Zemelman, Daniels, & Hyde, 2005), providing students with choice of topics is central to relevant student learning experiences, and facilitating opportunities for topic exploration and sharing of students' own thinking processes and findings contributes to making a topic relevant in maximizing student learning opportunities (Mosely, Ramsey, & Ruff, 2004).

Multiple Access Points

Another prevalent theme in the data was the ways in which teachers provided multiple access points to the curriculum for their students. All of the teachers discussed the need for understanding students' learning differences and implementing specific strategies that would help students gain access to the course material:

If your class was deficient in a pre-assessment of writing, and generally speaking, the writing is not up to par, I would focus on that first...if you have a class that doesn't even read very well, then you better focus on reading skills, and figure out what, if you had a class that wasn't writing very well...if I had an AP class, a whole different ball of wax (Interviews, 2009, p. 69).

In the above excerpt, Lora discussed how this knowledge of her students as a classroom community of learners influenced the English language arts topics and skills on which she chose to place more focus. Additionally, all of the teachers described various strategies they implemented to provide access points to the curriculum that addressed individual learning differences:

I try to target other modes of learning. You know, we're reading the novel, but I want something visual, I also want non-fiction, and I also want word analysis. So I try to have different ways of approaching the subject matter. Some people are better at vocabulary, you know, it's easier, some people are more poetic in their language so they can respond in more depth to the writing. So I try to target different ways for them to access the material (Interviews, 2009, p. 115).

The remainder of this section is organized according to examples of these different approaches. These include the implementation of instructional strategies, such as assessments, flexible grouping, visual reinforcements, collaboration, and modifications.

Assessments

Teachers implemented an array of informal and formal strategies to assess students' learning progress as a strategy for monitoring students' abilities to access the curriculum. One common strategy was pre-assessing student understanding at the beginning of a lesson or unit to inform the teacher's instructional approach, as Lora shared:

Now, I think, the concept of pre-assessing understanding and figuring out where the understanding is in the classroom before you even start the process of whatever you're teaching. And then, grouping by that pre-assessment, or offering individual small group sessions while the other groups are doing something else, or learning stations, or levels of choice (Interviews, 2009, p. 73).

Another example of this included analyzing previous assessments to determine students' skills development, as Meredith discussed:

And then thinking about and reflecting on my prior assessments, so skills they have, skills they've mastered, what interventions I need to do, sort of who needs to move beyond and who needs remediation on the skill (Interviews, 2009, p. 99).

Another example of assessment all of the teachers incorporated was the strategy of checking for understanding. How they implemented the strategy varied depending on the classroom concept or skill that they were teaching. For example, Jackie and other teachers described listening actively to students during class discussions to gauge their understanding: "I do a lot of assessing based on class discussion. That's really important for me. Are they getting it, or are they not getting it?"

Teachers also shared various ways that they reviewed student writing to check for understanding. In the following example, Melanie describes a student who did not understand the concept of theme, which was supposed to be the focus of the writing assignment. Melanie implemented the strategies of reviewing the written work to check for understanding as well as then discussing with the student directly possible comprehension issues regarding the assignment.

I had a student, she was talking about symbols, and I had them go over the assignment. Sometimes I'll let them rewrite. But I have to sort of figure out, did you truly try and just don't get it, you don't understand, let's talk and I'll try to explain it again (Interviews, 2009, p. 123).

Ginger shared her strategy of reviewing daily writing assignments to check for understanding:

You know, just write. I kept it general, what are your reactions to what happened in the reading last night? And then I collected them, not for a grade, but just a way to kind of to see what are the students getting or not getting from that (Interviews, 2009, p. 22).

Ginger's strategy of implementing a general writing prompt is an example of an entry point to the curriculum so that she could gauge their overall levels of comprehension.

Another strategy some of the teachers implemented was engaging the students in a physical task that elicited immediate feedback:

So, I always did, usually almost every day, had them reflect...Let's rewind, and this is what we covered today. Spend maybe a minute, and nod your head if you're tracking with me. Always some kind of...just nod your head...Now, this is what I want you to do. I want you to, I'm gonna give you about 15 seconds to think about this, and then I want you to give me this signal, on a scale of 0 -10 (Interviews, 2009, p. 62).

In addition to Kim's example of having students provide her with a hand signal that gauged their individual levels of student understanding, other teachers implemented physical strategies, such as having their students raise their hands to communicate what percentage of

the lesson they understood, and using participation strategies, such as rolling dice, that involved randomly selecting students to respond based on their assigned rows and seat numbers.

Teachers also incorporated multiple strategies for formal assessments of student learning. They stressed the implementation of student choice with final assessments so that students could demonstrate their skills mastery in one of many possible ways, depending on their interests and abilities. Study participants talked about providing project choices such as skits, multimedia presentations, songs, and art projects. In the below excerpt, Lydia discussed how she incorporated this student choice into a final assessment:

Well, one of the things that I did in my later years of teaching was...had an experience that the students could pick from, that they did on their own. And, it could be anything from writing and documenting work that they did in the community, volunteer work, to, like when we were teaching *Of Mice and Men*, they could go visit the Steinbeck Museum...and present a report. Or, they could read, you know, another Steinbeck novel and present...So, there's always each quarter something they could choose, that tied in tightly or loosely, however they wanted it to, with what we were accomplishing at the time...there were at least five or six different activities each quarter (Interviews, 2009, p. 70).

Another example of choice included Ginny's articulation of implementing a writing topic for a final assessment:

Most of the time, they have pretty much complete choice, so typically with an expository essay, I'll give them...suggested topics, like maybe six or seven, but there's always the option of writing on their own topic. And so, I...usually have them write a thesis statement, and supporting quotes and [they] give it to me, and I give them feedback before they start working on a rough draft. Because that makes it a little bit more manageable for them, and can kind of troubleshoot some ideas before they've gotten too far into it (Interviews, 2009, p. 18).

Joyce provided another example of providing choice on assessment in her creation and implementation of tests that allowed for some student choice for demonstrating mastery of skills and concepts:

And then I do a lot of differentiated group tests, so students have different kinds of sections of a test or of an activity, and I'll ask them to do something different. For example, with vocabulary...maybe there's a section that's all just straight identification or definitions, and one where students are writing, completing sentences and using the vocabulary words, and then others are writing shorter paragraphs. And with the shorter paragraphs, it always works that students have to do fewer of them in order to complete the task. But, overall, it ends up being that students are, whatever questions they choose, end up demonstrating their understanding (Interviews, 2009, p. 51).

Flexible Grouping

Teachers described many variations of flexible grouping, such as pair activities, grouping by ability, and grouping by topic focus. Teachers discussed different pair formations, such as think-pair-share, a three-step pair activity process: (1) the teacher presents students with a prompt (a question, observation), (2) the students dedicate a few moments thinking about it, briefly share their responses with a partner, and then (3) report out to the whole class. Kim described another example of a pair activity she implemented, which entailed engaging in a reflective process with an assigned partner:

I always had six rows, and I would partner, these two rows, these two rows, these two rows. And so, okay, turn to your partner, ask your partner one question that, if you had the answer to that question, based on today's lesson, or in the beginning of the lesson, and you could get that answered (Interviews, 2009, p.).65

When implementing larger group activities, most of the teachers created groups based on ability. In the excerpt below, Kim discusses her role as a teacher mentor in helping Sam, a second-year teacher, create flexible ability groups in his classroom:

The reason he selected this class for me to work with him with, it's because this is his most challenging one. And he has 20 kids, four in a group, five groups...and then, turn [their] desks, so they face each other...and then so he drew it...and then I said, okay, let's just go through your roll. Who are the top people, the top thinkers, just get five, and so we put one in each group. Now take the other end. You start with the high and the low, and you build, and then watch the personalities, and then balance it with a needy person, and then

balance it in gender. And then we filled in with all the rest of them. And we spent the whole period doing these groups (Interviews, 2009, p. 63).

Similarly, when placing them in groups, Joyce considered her students' personalities, the individual learning needs of her students, and her perceptions of her students' various learning styles:

[I was] trying to figure out who are the different kids in my class and what are their needs...and more than that, one thing is trying to divide the lesson each day so that at some place, the different learning styles of each kid is met...and really providing scaffolding for students...and providing them sentence frames that promote higher-order thinking, and having kids interact around those (Interviews, 2009, p. 51).

Some teachers also talked about creating groups according to individual classroom topics. One example of this was Melanie's implementation of reading groups. Students chose reading texts from a list of extended readings, and then Melanie placed them in reading groups according to the students' reading selections. When she had what she referred to as singletons, students who chose a book not chosen by any other students, she grouped these singletons together.

They're in book groups throughout the semester...so this whole book group... I put them into groups...they choose their book title...in pairing up, some of them are different abilities...they have very structured outlined tasks I give them for responsibility. They cover theme, character, symbolism, they cover different literary devices. And they have to write one to one and half page papers through the course of a semester with their book group. They share the grade, there are like, 20 to 25 point pieces of writing. (Interviews, 2009, p. 119).

The above example illustrates how teachers provide multiple access points to the curriculum by allowing students to choose a text based on their own interest or preference, and then engage in individual and group activities that support their reading comprehension and writing skills development.

Visual Reinforcements

A constantly recurring theme throughout all of the teacher interviews was the use of visual reinforcements. In addition to the visual examples and models discussed earlier in this chapter, all of the teachers described various visual strategies they used for increasing students' access to the curriculum, such as Melanie's example. Some teachers used graphic organizers, student-generated images, sketches, and posters, and visual images such as the iceberg visual Meredith described earlier in this chapter. In the excerpt below, Melanie described first implementing a line-by-line annotation strategy with her students in analyzing a poem, and then reinforcing the annotation exercise with a visual strategy to increase students' access to understanding:

They looked at the poem alone when I was gone for a BTSA meeting last week one day, and had a few questions that were...stock book questions to answer about it and then we went back through and spent about 45 minutes to an hour Monday just going through line by line and working through the text itself...[then] we went through a visualization where I had them draw something they saw in the poem, they could create an image, just a sketch (Interviews, 2009, p. 112).

Joyce discussed providing students with visual images in teaching vocabulary, as well as having them produce their own visual reinforcements:

And trying to get from that context to...get what the meaning is and...just figuring out where they are with that, either providing them with direct definitions, or if the textbook that we use provides a glossary, having them check there...so learning in one of those two ways, or maybe using a PowerPoint, giving a picture and a definition, and having students write that down, and then turning those into flashcards (Interviews, 2009, p. 48).

Collaboration

Collaboration became another recurring theme in how teachers attempted to provide their students with increased access to the curriculum. For many of the teachers, collaboration included collaboration in the classroom, as well as teacher collaboration with

other colleagues. A couple of the teachers talked about the importance of creating a classroom community that fostered a collaborative work environment, as Meredith highlighted:

A lot of times, I'll say to them, our classroom is a community. We're a community of learners. And yes, I'm the teacher, but I hate to come across as a know it all. I'm not. I'm a lifelong learner, and if I can inspire that in students, then I've done my job. But I think that we're all in this together, and that we see each other every day. And so, we owe it to each other to be here, be present and engaged (Interviews, 2009, p. 108).

Melanie described in more detail ways in which she created this collaborative classroom culture:

Yeah. I think trying to create a classroom culture where kids feel comfortable is important there, and I think that ultimately the teacher's responsibility...so, I think that by trying to create that classroom culture through things that we do the first week of school, or by repeating certain norms of behavior, by using strategic seating...if it's a class that is clearly having problems with that, I'll do a seating chart, and I'll actually do it for everybody so that there's not a few kids being singled out (Interviews, 2009, p. 23).

Teachers also articulated the importance of collaborating with their colleagues to support student learning. A number of the teachers extended beyond just collaborating with other English teachers to include other school support staff, as Ginny described:

Another individual strategy, I think, is just working with support personnel. You know, special ed teachers, or talking to counselors if I have a concern about a student. There's a new program called College Pathways...and, the idea is that they...have a common counselor...so checking in with the counselor of those students is something that I do (Interviews, 2009, p. 23).

In discussing the beginning teacher she is mentoring this year, Kim described the potential negative impact that not collaborating with other staff might have on an individual student's learning progress:

Sam worked with [the student's] special ed teacher...[the student is] supposed to do the assignment in the blended English class, and Sam has not

received it. But Sam has not asked for it, has not asked the student, has not asked the teacher, I guess because he's being inundated with this process of trying to balance everything. And Sam and this boy, James, is just one student in five classes of English. So how do you advise your teachers that you can't start something and then not follow through? Whatever it takes, picking up that phone and connecting with that teacher, it takes three minutes, four minutes, and see where that assignment is because the message that you're giving James (Interviews, 2009, p. 66).

Within their own departments, some of the teachers expressed collaboration in terms communicating common learning outcomes and developing shared assessments for evaluating student work, as Meredith depicted in the following excerpt:

So, as a department, the collaborative work that we've done, we have developed writing outcomes for each grade level. And that's great. And we're still working on some agreed upon assessment or rubric...we should have it so that A on a persuasive essay in my classroom is very similar to...an A in persuasive in any other teacher's classroom...we collaborate often because we have kids, and we share these same kids, and we talk often about strengths and weaknesses...and I think that directly impacts our student learning (Interviews, 2009, p. 109).

Teachers also discussed collaborations with their colleagues that facilitated ongoing reflection regarding their own teaching processes and ways to continue to improve and grow in how they approached their teaching. These collaborations included such things as informal mentoring partnerships or exchanging ideas and teaching materials, as Lydia highlighted:

I formed a partnership with another teacher...and it was really interesting...we...debriefed...and when we just got talking together...we planned that final together, we planned a couple of group projects together...we were co-mentoring each other...and we were kind of opening the door to each other (Interviews, 2009, p. 74).

Ginger articulated specific ways in which members of her department supported one another in sharing individual teaching strengths, topic ideas, strategies, and materials:

I have a ton of stuff in curriculum binders that have come from other people. Hey, you know, I'm looking for some new essay topics for *Romeo and Juliet*. Oh, I've got some. You can look at mine. Or, what would be a good way to get kids who seem reluctant to buy into the book engage with these

chapters of *Caged Bird*...I think a lot of us have different strengths in dealing with different kinds of kids. You know, some of us are really good that motivate the really high-level kids, and others really have a stronger understanding of kids who really don't like reading, or don't like school, so I'm able to get different pieces, I think, from my colleagues, that helps for a different range of learners (Interviews, 2009, p. 22).

Modifications

Modifications emerged as a pertinent theme to making learning accessible to the diverse learning needs of a classroom of learners, particularly in differentiating assignments to meet the needs of English learner and special education students:

If you are a struggling English language learner, I might say, again, I'm...only looking for this in you right now. I'm just [going to] to look at the ideas this time for you. I'm not going to correct your writing (Interviews, 2009, p. 31).

Several of the teachers discussed using this type of modification strategy that Jackie described in the above excerpt as a means of support for struggling learners. Teachers based the parameters of the assignment for each individual student on his or her learning challenges. Melanie defined this strategy as a tiered assignment:

Tiered assignments, or I'll produce something and then they'll have, there are levels, we use rubrics in terms of writing, or visuals, and they have to produce a certain amount to target a certain level (Interviews, 2009, p. 115).

Tiered assignments provided a way for teachers to scaffold their assignments to support students in moving toward mastery of understanding, as Jill articulated:

What I would do, and it really varies, from student to student...if it's a disability, what is their disability and what...are they capable of and where do they need the support. If it's an English learner, where is their English proficiency, and how much scaffolding and whatnot. And that's exactly what I would do. I would scaffold you have to move to a different type of list, but regardless, just tons of visuals and modeling (Interviews, 2009, p. 42).

These examples of providing multiple access points for students supports the research literature that suggests that (1) learning is a developmental process that involves teacher

consideration of students' emerging and developing capabilities, (2) democratic procedures and structures can facilitate more effective, productive classroom environments, (3) that students' learn by constructing ideas and systems, and (4) collaborative learning activities facilitate student expression as a means of deeply engaging in ideas (Tapscott, 2009; Zemelman, Daniels, & Hyde, 2005). Findings also align with research that has focused on today's Millennial and Gen Net learners, experiential students who have been raised learn as a result of generative approaches to learning that engage students in a variety of hands-on, active learning activities and ongoing feedback regarding their development of skills and concepts (Sweeney, 2006; Tapscott, 2009). This is in contrast to a transmission approach, the more traditional, passive teaching and learning model of previous generations such as Generation X and the Baby Boomers (Cambron-McCabe & Dutton, 2000; Litten & Lindsay, 2001; Tapscott, 2009). The findings for this section also align with research that suggests that teachers' thinking about teaching and learning is contextualized to specific teaching actions in relation to the topic or content being presented rather than general conceptions of teaching and specific teaching practices (Eley, 2006), and that teachers implement multiple strategies to support student comprehension of the course material (Massengill-Shaw, Dvorak, & Bates, 2007).

Real-Life Relevancy

Another recurring theme was connecting aspects of the English language arts curriculum to real-life. Though a personal connection to a student's life, as explained above, would be one example of real-life relevancy, the dominant theme teachers articulated for real-life relevancy was connecting their curriculum to the real world beyond students' own immediate life experiences to include relevant connections, such as current events and

students' personal interests as a strategy for motivating them to care about the topics and find meaning in what they were learning:

Sure, if we were doing, say, a unit on heroes, reading the *Odyssey*, I may throw something in where we're talking about our recent elected president. I may throw something in about him and his background and his journey. You know, which is similar to Odysseus's, of going different places, because [Obama] traveled to different parts of the world and then ended up where he is now, coming kind of home, if you will, to Washington, D.C. as a hero. I'm sure his mother would be really proud of where he is, similar to how Odysseus...because as great as I may think the *Odyssey* is, or *To Kill a Mockingbird*...it's motivating them to care...where they go, oh, okay, now I can see how it's important or why I should care (Interviews, 2009, p. 128).

Kim stated that she would tell her students every day explicitly what they were learning and why it was relevant:

always will say, this is why we're doing it, and why it connects to you, or you tell me how it connects to you, and I used to have a banner up, lifelong learning, and I would point to it all the time. This is lifelong learning (Interviews, 2009, p. 59).

Another example Kim described in making real-life connections for students within the structure of a lesson was with the novel *To Kill a Mockingbird*. Kim explained that Sam, the beginning teacher she was mentoring, wanted to dedicate time in class to discussing Atticus' closing speech to the jury. The novel takes place in the American south and is set in the 1930s. Atticus is a lawyer who has been appointed to defend Tom Robinson, an innocent African-American man accused of raping a young white woman. In the following excerpt, Kim depicted connecting the theme of racial inequity in the novel to a film dramatization of a real-life event:

The movie *Time to Kill*...and the the black man who had killed the two men who had raped his daughter...and the closing, almost closing scene, when he was addressing the jury, he had them close their eyes, and he went through everything that had happened to that little girl, and they all closed their eyes...then he says...now see her white. He was just describing what happened to this black girl, and then he said, now see her white. And he was

acquitted...the teacher showed just that part. Now that's what's bringing real life. This is a novel, this is, how we have to realize it, this is being dramatized, and it's done for effect, but it's a racial issue, and that's in *To Kill a Mockingbird*, and so all he did, and they wanted to see the whole thing, but [Sam] just showed just that much so he could connect it with Atticus' closing scene, that's how you bring it, that's how you connect it. You come up with anything that is relevant today (Interviews, 2009, p. 60)..

Making the curriculum relevant to real-life situations is aligned with research that suggests that authentic learning experiences contribute to the real-life complexities that students encounter in their own daily lives (Zemelman, Daniels, & Hyde, 2005). This also supports the research that indicates that teachers contextualize their teaching practices to the subject and situation being presented (Bell, 2007).

Research Question Three

In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of curricular organization? Wilson, Shulman, and Richert (1987) described curricular organization as a teacher's understanding of the various ways in which to organize the teaching of a discipline. An example of this in high school English language arts would be organizing subject matter according to specific reading texts (novels, short stories, personal narrative). Reading, writing, listening and speaking activities might then be organized specifically around these types of texts. Some of the study participants did discuss curricular organization in terms of how they would organize certain aspects of their curriculum around specific themes and literary texts. For example, Lora discussed organizing specific writing skills around the novel *Of Mice and Men*. Another example was Meredith's description of organizing her teaching of character analysis and persuasive elements around the play *Romeo and Juliet*. However, the study participants who articulated this type of

curricular organization did not elaborate on why they would organize certain concepts and skills around these specific works of literature. Rather, most of the teacher participants chose to articulate curricular organization according to the overall structure of how they planned a lesson or unit. These included using planning techniques, such as backward design, or planning units and lessons around a particular skill, such as critical thinking.

The study participants then explained their individual systems for organizing various units and lesson plans according to concrete structure for how he or she organized the course material and presented it to students in ways that maximized learning opportunities. All of the teachers discussed organizing units around some end-in-view for the skills and concepts they wanted students to learn. Additionally, the majority of teachers discussed a unit or lesson plan structure that facilitated the development of critical thinking skills. Table 5 depicts participant responses per theme. Unit and lesson planning connections and critical thinking emerged as themes.

In terms of individual lesson plans, all of the teachers described a lesson plan structure that included some sort of introduction, scaffolded activities, and a conclusion. For some teachers, this lesson planning structure evolved over years of experience. Other teachers discussed the influence of professional development on how they thought about and approached their units and lesson plans. In addition to the actual structure of a unit or lesson plan, teachers devised teaching strategies that supported organizing course content in ways that promoted the development of critical thinking skills.

Unit and Lesson Plan Organization

When articulating their overall unit planning structures, teachers discussed having some overall vision of what they wanted students to learn. Some teachers defined this as

Table 5

Participants' Responses of Pedagogical Content Knowledge of Curricular Organization

Theme	No. participant responses identifying theme
Unit and lesson planning	12
Critical thinking	11

backward design. The term backward design comes from Wiggins and McTighe's (2005) *Understanding by Design*, a text on organizing units of instruction by starting with an essential question or theme linked to one or more concrete learning outcomes. Backward design contains three overarching planning stages: (1) identifying the teacher's desired results (identifying what content and concepts the students should understand, know, and be able to do), (2) determining what collection of evidence supports this learning (gauging what evidence will demonstrate evidence of student understanding as well as proficiency), and (3) planning learning experiences and actual instruction (determining which instructional activities will be the most appropriate for achieving the desired learning outcome and the knowledge and skills students will need to successfully achieve these learning outcomes).

Meredith provided an overview of her use of backward design:

So, I have always been an advocate of backwards design, always thinking about what it is that I want students to do in the short term and in the long term. So, I'm thinking about what the outcome is, and knowing the type of writing, the mode of writing that I'm gearing them up for (Interviews, 2009, p. 99).

Other teachers, such as Lora, identified this backward planning model as asking themselves specific questions as they began the unit planning process:

First of all, the first thing you have to figure out, is what you want to teach before you organize that unit? What do you want them to get out of it? So, why are you teaching it? (Interviews, 2009, p. 60)

Lora extended her articulation beyond just the structure of an individual unit to include the entire school year and planning individual units to connect major themes from unit to unit to consider first her sequencing of themes, then a plan for how she would implement a logical sequence of skills instruction around those themes:

So, what I try to do is you know, pre-plan my whole year so that there's a logical sequence of themes, and a logical sequence of skill-building. So, if I got *Of Mice and Men*, for example, to begin with, then I would go with certain writing skills around that, and then move to the next level in, say *To Kill a Mockingbird*. And then the nice thing too is everything all hinges to everything in English. I always try to do, instead of a poetry section, I would try to do thematic poetry. We would read *All Quiet on the Western Front* and then we would do war poetry. Or, we would read *To Kill a Mockingbird* and have them do relationship poetry or the Harlem writers, so I try to thematically connect things, which is the nice thing about teaching English (Interviews, 2009, p. 71).

Another strategy for organizing a unit of instruction was to consider various learning modalities and plan the unit to incorporate these modalities, which Melanie highlighted:

With organizing units, it's really important to me, I try to target other modes of learning. You know, we're reading the novel, but I want something visual, I also want non-fiction, and I also want word analysis. So I try to have different ways of approaching the subject matter. Some people are better at vocabulary, you know, it's easier, some people are more poetic in their language so they can respond in more depth to the writing. So I try to target different ways for them to access the material (Interviews, 2009, p. 115).

Some of the teachers also articulated using the California English language state standards as a guideline for planning a unit of instruction, as Joyce described:

Most of the time, when I'd start, the focus is somewhere between starting with the standards and finding the tasks that were appropriate to it. And so I think starting with the text and looking at the standards that are embedded within it (Interviews, 2009, p. 46).

Teachers' strategies for lesson planning within a concrete structure included such aspects as posting and reviewing a daily agenda, starting each class with an introductory activity that was connected to the goal or objective of the lesson, implementing scaffolded activities connected to the learning outcome, checking for understanding, and reflecting on what students learned. Teachers described this in a couple of different ways. One example of this was an intro (introduction), through, and beyond strategy for organizing and implementing a lesson plan. In the following excerpt, Meredith described the intro and through aspect of teaching Shakespeare's *Romeo and Juliet*:

I like the idea of the intro, the through, and the beyond...for example, for *Romeo and Juliet*, we did a survey about how we would act given a certain number of scenarios, and then as we were moving through and looking at the character analysis, we were reflecting on our own experiences. And then scaffolding in some support. So, if I knew we were going to be getting toward this argument essay, this persuasive essay, then we started talking about paragraph structure, again, just in small chunks, just to prepare for the big piece...we talked about if I was [going to] argue with my parents where I would like to put my best piece of information. Would I say it first, or would I say it last? And then when the time comes to write our essay, we talk about organization. You're going to save your most convincing argument for your last paragraph or your first paragraph? (Interviews, 2009, p. 102)

Another teacher, Kim, described the intro, through, and beyond as a five-step lesson plan structure that she learned early in her career during a series of professional development workshops:

[Kim]: Madeline Hunter came up with a five-step lesson plan, which I reproduced and gave to my teachers...

I: All five steps?

K: Not all five steps, but a blending of them. So, it's basically like writing a paragraph, this is what I say. It's like writing a paragraph or writing an essay. You have an introduction, and you develop it, and then you have conclusions, and you have transitions in between, so there are connections, and that's the lesson plan...what we're gonna do, this is how we're gonna do it, and checks for understanding, and at the end, a summary, but not just what we did, but

what did you gain from the lesson of the day. And making connections (Interviews, 2009, p. 57).

In providing details about each step of implementing a lesson, teachers used openers, or starter activities that connected to the overall objectives of the lesson, as well as for assessing prior knowledge. In the excerpt below, Joyce described an introductory activity, which she identified as a “kickoff”:

The kickoff is an entry point, you know, like any kind of starter activity for most lesson plans, having prior knowledge, and stuff like that. But there’s usually, as much as possible, kind of opinion-based, or reflection about what students still remember, or understand, or are interested in (Interviews, 2009, p. 49).

Amy discussed using KWL and graphic organizers as visual ways to organize and assess prior knowledge about the 1920’s before students started a unit on *The Great Gatsby*:

The Great Gatsby. That’s really getting into the twenties, doing the Fitzgerald biography, that type of thing. That was the into. I started with the KWL and graphic organizers, we talked about what they knew about the twenties (Interviews, 2009, p. 3).

From these types of opening activities, teachers then described scaffolded activities they implemented that connected back to their opening activity, as well as to the lesson objectives. Melanie’s earlier description of teaching personification illustrated this:

We’ll just start defining out loud...I’ll throw a term or an idea out, and I’ll ask someone to define or articulate what it means, and so we start just by discussing it, and then they have to take notes down...and so we’ll get down as much as we can, and then I’ll usually have them go to the dictionary after...to see that there are these levels of meaning, words have shades of meaning. And so they’ll have to write out a formal definition, and then we’ll just start reading the poem. So we read a poem, and then they have to [identify] examples of personification in the poem...and so I actually go through a process where we like code lines in the poem. They might have to circle words that have been personified or highlight symbolic objects, and so for each kind of aspect, and we’ll go to the narrator or mood or tone, and I actually have them color code or visually identify, and they have to write and annotate all over the poem. And so we’ll really kind of break it down that way... I’ll want them to tell me, what is being personified and why is it

personification? So then they're looking for part of class discussion within the poem itself (Interviews, 2009, p. 116).

The primary strategy many teachers used for closing their lessons involved asking students to reflect back on the lesson and what they learned. Ginny described using a learning log:

And then the learning log is a lot more specific to what I learned today, what am I confused about...and we also do a quarterly reflection on student performance in the class, and also student understanding of the material (Interviews, 2009, p. 50).

A couple of the teachers, such as Kim, used an exit ticket strategy as a way to provide daily closure:

Also, a lot of tickets out the door. What did you learn today, the 3,2,1, and so three questions I have, two ah-has, and that type of thing. Just to think about, I didn't sit here for an hour wasting my time. I was here for a reason (Interviews, 2009, p. 4).

These findings support the research that suggests learning should be a holistic process in which students learn more effectively by understanding the "big picture" regarding what they are learning and why (Zemelman, Daniels, & Hyde, 2005). These findings also align with research that suggests that effective teachers create connected learning activities and experiences for their students (Bell, 2007).

Critical Thinking Skills

Within the structure of a unit or individual lesson plan, teachers incorporated a teaching strategy structure that facilitated the development of critical thinking skills. All of the teachers discussed critical thinking as an essential skill that students needed to develop in order to become active participants in their own learning. Most often, teachers articulated critical thinking strategies in terms of teaching reading and writing, as Meredith encapsulated below:

This speaks exactly to teaching of writing...because with writing and with crafting writing prompts that inspire critical thinking and original thought over just rote

memorization of facts. It's... moving away from just research projects, but ...having a prompt that allows every student to be original and have their own perspective on a topic while still being, using, or relying on the text for evidence....so they're writing about who is to blame for the deaths of Romeo and Juliet, and some are saying, well, Rome and Juliet, of course. And some are saying, Friar Lawrence, and some are saying, well their parents, and some say fate, and they're all valid. That they were allowed to have that conclusion and support it with evidence, so I know they've read, I know they understand the text, and they are refining their own voice in writing (Interviews, 2009, p. 106).

This example illustrates the perspective of implementing critical thinking strategies as essential to moving students beyond simple, passive regurgitation of facts to a higher level of synthesis as students develop their own hypotheses and validate these with specific examples from the text.

Jess described implementing a critical thinking strategy that provided scaffolding for students in moving toward higher-order thinking:

I mentioned before that when students are doing reading, they're doing guided questions. And a lot of the early ones are...reading for comprehension, did you understand what was in the last paragraph...but then, really moving towards that higher level of thinking, comparing and contrasting...and so, really working in those kinds of questions on a daily basis...something that all students should do in order to synthesize and integrate new information or ideas. And so, looking at ways to have students not only answer those questions, but then start to ask some of themselves and of each other...they're constantly finding ways to connect the things that they're doing in reading, but also finding ways to pose those kinds of questions and anticipate that kind of thinking (Interviews, 2009, p. 50).

Melanie used line-by-line annotation as a strategy for teaching students to think critically about literature:

We used one poem, *Work Without Hope*, and the writer took the title of her novel from the poem. So we just started by looking at that poem. So we talked about aspects of poetry and language and quality of the poetry, and then we worked specifically with that poem. And then the idea was to get them to connect what is the theme in the poem and how would that relate to how this woman chose to title the novel as such, so how does the poem relate to the text overall (Interviews, 2009, p. 111).

In the above example, conducting a line-by-line analysis of the text provided students with the opportunity to think critically about the poem by discussing possible reasons why an author would take the title of her novel from a specific poem, themes within the poem that supported these reasons, and ways in which themes of the poem itself might relate to the novel the students currently were studying.

Another aspect of teaching critical thinking skills to students included relating the text to real-life situations. Jill explained questioning and discussion strategies she used with her own students:

One of the things we look at with regard to when I approach any novel...[is] the study of human nature, and so any time I can bring sociology into teaching...like *The Crucible*...why do people tend to go along ...when they're in a group they feel more powerful...the same with *To Kill A Mockingbird*, kind of that mob mentality...a lot of the moral decisions that are made... it's always going beyond the plot, and kind of even taking it that character out of that novel and just looking at some of the decisions that he or she made...and so I think that really causes them to start thinking more critically about the decisions not only that they make, but that they see others making, whether it's on a personal level, you know, a global level, and politicians...and I love having those with teenagers (Interviews, 2009, p. 42).

Ginger provided another example of a critical thinking strategy in regard to providing students with feedback that would push their thinking beyond a basic to a more complex and refined level:

A lot of that I feel comes back to feedback that I give them [for the reading logs]... where they're talking about [a] character in the chapter and the decisions he's made...and so the comments that I put are a way to support them in that or...gently point out another point of view...as well probably as verbal feedback, in a whole class discussion, where the student makes a comment...creating a space where other students can respond to that...I agree for this reason...or I disagree for this reason, or me helping them to see something they don't see. I think that's a big aspect of that, to help them to refine their ideas (Interviews, 2009, p. 20).

These findings, in regard to the theme of critical thinking, support the research that suggests that critical thinking facilitates the construction of ideas that are essential for today's learner to function successfully in modern society (Zemelman, Daniels, & Hyde, 2005). These findings also align with research that suggests that the implementation of peer instruction strategies that calls for students to apply core concepts engages a higher number of students and correlate to increased student learning outcomes (Crouch & Mazur, 2001).

Research Question Four

In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of which topics are most relevant to include in the curriculum? According to Shulman (1986), topic relevance is the teacher's ability to understand a specific topic within a discipline and to determine which topics are essential to include in his or her instruction, as well as which topics can be considered peripheral. Study participants articulated their pedagogical content knowledge of topic relevance by identifying specific topics they felt were essential to include in their English language arts classroom instruction, such as writing, reading, and vocabulary. Almost all of the study participants failed to articulate a specific rationale for including writing and vocabulary as relevant topics. Study participants did articulate reasons why they felt reading was an essential topic to include in the secondary English language arts curriculum, however.

Teachers related topic relevance predominantly to the second section of this chapter, pedagogical knowledge of the learner. This was most likely because teachers decided on which topics to include in the curriculum based on the learning needs of their students; thus, the topics they included in their curriculum were contextualized to some extent to the learning realities of their students. Table 6 depicts participant responses per theme. Writing,

vocabulary, reading, and school context emerged as themes. The remainder of this section is organized into according to these four themes. Each theme is discussed in the same order as Table 6.

Table 6

Participants' Responses of Pedagogical Content Knowledge of Topic Relevance

Theme	No. participant responses per theme*
Writing	11
Vocabulary	8
Reading	7
School context	6

Writing

Though all of the study participants identified writing as an essential English language arts topic to include in the curriculum, only a few of them provided specific reasons regarding why they felt writing was essential. For example, teachers identified expository writing as a topic to include in the curriculum. The teachers then described some of the elements of an expository piece of writing, such as developing a thesis statement and supporting it with evidence. They did not elaborate, however, as to why these aspects of expository writing were essential to include in the curriculum. Instead, the teachers focused on describing their processes for including writing, vocabulary, and reading in the curriculum (such as connecting writing topics to the literature students were reading). A few of the study participants did identify at least one rationale for teaching writing, which included writing for a specific audience as a foundational writing skill students needed to learn. Kim described

this in her statement of “seeing more and more students who are really...unaware of their audience.”

Most of the participants discussed their English language arts curriculum as literature-based, and as such, they connected the writing topics they taught directly to the literature they were reading and analyzing:

I think one topic that I tend to hit a lot is expository writing...they're literature based...we read the book, we do various activities in the course of reading the book, we do very short writing assignments, and then...there's an assessment at the end...and so, being able to develop a thesis statement, the skill of developing a thesis statement, being able to argue it effectively, being able to find good evidence, being able to use that is really one of the major topics... that we cover (Interviews, 2009, p. 14).

In the above example, Ginger connected the writing skill of expository writing, which includes developing a thesis statement and supporting it with examples, to the literature she was covering at that time in the class, which in this case was a novel. Some of the teachers articulated teaching essential writing skills, such as grammar and mechanics, in ways that students could practically apply, as Jackie depicted:

And then applying skills – I talk a lot about what to do with what we're doing. You know, why am I hammering you guys on capitalization? Well, let me tell you... has anybody...ever had to write a letter of complaint? (Interviews, 2009, p. 34)

Teachers also discussed writing as an essential skill for personal expression. In the next example, Meredith explained her preference for providing students with written assessments to gauge their understanding:

I'm not a huge fan of the Scantron tests. I really like to assess students through their writing after we finish, say, a novel, because I feel that they are more, they are able, there's just a greater opportunity for them to express what they've learned (Interviews, 2009, p. 43).

Another aspect of personal expression was the development of student voice:

So part of every single year...I'd always say, this is your voice, this is who you are, you are going to be reflected by oral language and written language. And...thank you notes that I received for gifts, I'd always save a few and that was part of my final, and I'd read them. Now you tell me, how you would feel if this was written to you. And then how you would feel if this wasn't written to you. Because it's your voice, you're presenting yourself Interviews, 2009, p. 67).

Another aspect of writing topic relevance connected to the pedagogical content knowledge aspect of the learner, in which the teacher determined which topics were most relevant to include in the curriculum based on the context of the classroom and students' learning needs. Tim discussed contextualizing writing topics to each individual student. For example, he organized the structure of his journalism class so that students were completing different tasks during any given day. Some might be out in the school community conducting interviews for news article stories, while others could be meeting with potential advertisers for the school paper. This provided him with the opportunity to dedicate individual time to a small group of students and determine which writing topics and skills would be the most relevant according to his students' overall writing skills progress:

And I'm at a huge advantage in that class, because it's almost like having an English class with 10 students, where you're able to sit down with each student completing an essay, and saying, Johnny, you know, your introduction, on a daily basis (Interviews, 2009, p. 138).

These findings support research that effective teachers teach in ways that promote students' "ability to use language, content and reasoning in ways that are appropriate for particular situations and disciplines" (Langer, 2001). These findings also support research on teachers' beliefs that writing captures the thinking processes of readers and increases the meaning of texts (Asselin, 2000).

Vocabulary

The majority of teachers identified vocabulary acquisition as an essential English

language arts topic. Only one teacher, Joyce, articulated why she felt vocabulary was essential component of English language arts instruction. She described the inclusion of vocabulary as one way for students to determine, through vocabulary, to make meaning of the texts students were reading. All of the teachers identified their primary vocabulary teaching strategy as teaching vocabulary within a particular context:

Vocabulary has to be taught in context, not arbitrarily listed...to be connected, so it's taking words from whatever they're reading and then also, then using it. They have to...see the connection, and to learn context clues in guessing...they need to use the word in some way on their own...that's vocabulary. It's a pattern of instruction (Interviews, 2009, p. 61).

Similar to Kim's illustration above, many teachers taught vocabulary words that appeared in the texts the students were reading. In addition to looking at how the words were used in the context of a sentence or phrase in the text, vocabulary was described in the context of students' daily lives:

And it's cumulative, too, so you know, we have eight words the first week, 16 the next week, 24, so they keep seeing the words over and over throughout the course of the semester, and they keep hearing them used in context over the course of the semester, and that is nice, because I often see them using the words in their reading logs, or their essays, or they will use it in class, or kids will sometimes come in, and say, I was watching TV and they used the word, contemptuous (Interviews, 2009, p. 17).

Teachers spoke of having the students learn to use the words in the context of their own written work, such as in writing sentences, but Tim extended beyond the exercise of sentence writing to contextualize vocabulary in the students' news story writing pieces:

I encourage them to write beyond the traditional sixth grade level for newspapers. And so...instead of using a word like "looked at", a word like "examined", or "analyzed", something that they wouldn't normally write, but being able to substitute that within the language of their story (Interviews, 2009, p. 132).

Reading

Every teacher identified reading as a relevant topic to the English language arts curriculum. About half of the teachers worked in schools where the reading selections were mandated by the district. The remaining half of the teachers taught in schools where the curriculum was novel-based. While many of the novel-based classroom teachers were required to teach certain literature selections for each grade level, they also had some degree of choice over which pieces of literature they included in their curriculum, as Melanie described:

We have required texts, and then we have additional texts we can choose from. But the teachers in the district and the literary collaborative groups choose the literature that's required. So it's very valuable...it's chosen within the community, teachers from the different high schools. So I feel like the literature we have is very valuable and a process occurred in order for those books to be required and selected. So I think it's been well done, and I feel strongly about looking at the text (Interviews, 2009, p. 112).

On the contrary, the teachers like Joyce, under strict district mandates, had little choice over which literature selections to include in their curriculum:

In the reading support class, it's pretty prescribed and [a reading program called] Read 180, so there's the book that goes with it and everything is really prescribed within it, and so my work is a lot more about how to help students access books and the materials and really build those skills to meet the standards. With English, it's a lot more about finding ways for students not to access just the skills and the standards, but the context of the selections because I think it's a little bit harder for them to really connect with the texts (Interviews, 2009, p. 46)

Regardless of whether teachers had choice or not over the literature selections to include in their curriculum, almost all of them discussed implementing independent reading as an essential reading topic component. All of the teachers provided students with the opportunity to choose their own literature selections. Some students were allowed complete

freedom of choice. Other teachers required their students to be able to choose from a teacher, school, or district list of selections:

They're responsible for choosing it, but with some boundaries. My sophomore class, I went through our extended literature this year...I looked at our required reading list and I looked at our extended list...there's a lot of variation...I feel that we have a lot of freedom in terms of teaching and choosing literature. So I first went through the required literature to just plan out the year, in the summer, of what we're covering each quarter. Then I pulled readings from our extended list that I knew I wouldn't be covering in class...I chose books that I have taught before, have read, that we're familiar with, and that fell into that category of being literature from other cultures (Interviews, 2009, p. 119).

In the above example of Melanie's class, the independent reading component was tied to the topic focus of each quarter of the school year. For Melanie, the independent reading was about stressing the notion of reading to learn. In providing her 10th grade World Literature students with texts she has already read and feels are relevant to cross-cultural literacy, Melanie exposed students to literary selections that she felt were absolutely essential to read and understand:

I found out, for example, a lot of people use the *Diary of Anne Frank* in fifth through eighth grade, I know it's on a lot of required reading, and I polled my sophomores. About half of every class had never read it...and I felt that book was so significant, so I added it on there, and I said...we read because we want to learn and be educated and understand life...this book is probably on a fifth, seventh grade reading list somewhere else...however, she was your age when she was imprisoned and wrote this book. A prisoner, you know, basically, in her own home environment. I said, so I don't think that it's a fifth grade book, technically, and I had a number of students read it. And I thought, everyone should read it. It's Anne Frank, and you have to read that book (Interviews, 2009, p. 119).

Other teachers, such as Jill, felt that providing free choice of independent reading selections was an effective strategy for engaging students in the act of reading:

I had an independent reading component to my class, and I liked to call it recreational reading because my goal there was for students to...find enjoyment, all students would find some enjoyment in reading, and so with

their independent reading books I always allowed them to choose their own because I think the key to having kids enjoy...reading, is allowing them to explore the areas of interest, and I think they really...appreciated that, having that freedom to see that (Interviews, 2009, p. 38).

These findings support research on teachers' beliefs that pleasure reading should be part of class instruction (Asselin, 2000), and that reading is central to conceptualizations and teaching of literacy (Yeo, 2007).

School Context

Another recurring theme within topic relevance was the extent to which school context affected which topics teachers included in their curriculum. Twenty-five percent of the teachers who participated in this study worked in schools that implemented prescribed curriculum:

We use the vocabulary books, which many teachers say we don't have vocabulary anymore because we have a vocab book, because once you have the vocab book you don't have to teach vocabulary anymore, you just teach the book.

I: It's just whatever's in the book.

J: Uh huh. (Interviews, 2009, p. 28).

These teachers voiced concern over being mandated to teach prescribed curriculum due to the loss of creative freedom as well as the concern that the prescribed curriculum did not provide a depth of instruction that facilitated the development of skills that the teachers perceived to be essential, such as critical thinking and writing skills. Linda expressed this concern in the following way:

So many things are based on Scantron tests and so-called objective tests, which are shallow teaching, which are just skimming across the surface, as opposed to giving kids time to teach writing; it's the most important English language arts topic. To teach writing really requires a time element, it requires a teacher who feels confident and willing enough to take risks...and a large portion of what we're mandated and told to do militates against this. For me, as a teacher, this is hugely frustrating (Interviews, 2009, p. 79).

Additionally, the teachers who worked in these prescribed curriculum environments voiced the concern regarding the quality of the English language arts instruction due to teaching a prescribed curriculum. One example of this was Tim's commentary during the study interview, which took place in a district office room where copies of the English language arts curriculum texts were kept:

All those blue books, those are for freshman English. And the ones underneath, those are for sophomore English. And no two of those books are the same. I can read from here: writing, listening, spelling, is one of the books, another one is interactive reading, grammar, audio CD libraries, so the days of having four novels handed to you and being told, okay, you need to teach these, that was my experience. And as painful and as stressful as it was for me at the time, it was also good because it, I think it accelerated my growth as a teacher (Interviews, 2009, p. 127).

In addition to Tim's concern over a teacher's own professional skills growth, Lisa expressed her perception that forcing teachers to implement prescribed curriculum hindered them from developing as quality professional educators:

We were supposed to be up for textbook adoption, but I was really afraid of the scripted teaching that is sweeping around...and I was saying that we really had to get more theorized in our department so we could speak intelligently about these things...so we could stave off this big assault. And then what happens is these textbook committees...promise that teaching is going to be fantastic administrators love it because it's all standards correlated. And then they think, okay, I can get anybody off the street, and give her this teacher portfolio, and ta da, we're covered. And, that's not so (Interviews, 2009, p. 80).

These findings support the research that indicates that the most authentic learning opportunities are ones in which "rich, real, complex ideas and materials are at the heart of the curriculum" (Zemelman, Daniels, & Hyde, 2005, p. 10), and that teachers' perceptions about reading and their reading instruction are impacted by school and/or district-mandated reading programs (Richards, 2001). Chapter V includes further discussion of the findings.

CHAPTER V

SUMMARY, CONCLUSIONS, LIMITATIONS, IMPLICATIONS, AND
RECOMMENDATIONS FOR FUTURE RESEARCH

The purpose of this study was to examine the ways in which experienced secondary English language arts teachers articulated their pedagogical content knowledge. Teachers' articulation of pedagogical content knowledge was examined in four ways: (1) how to teach a subject area in ways that maximized student learning, (2) knowledge of learners, (3) knowledge of curricular organization, and (4) knowledge of the most relevant topics to include in the curriculum. For the purposes of this study, exemplary teachers were defined as those teachers who maximized student learning opportunities by implementing the best practices identified by Zemelman, Daniels, and Hyde (2005) that include "challenging, authentic, and collaborative work" (p. viii).

Summary of Study

Of the studies that have explored high school English language arts teachers' pedagogical content knowledge, most have focused on case study approaches that examined pedagogical content knowledge through observations, videotaped teaching sessions, and interviews with only a few teachers, which is a limitation to the generalization of research findings (Gatbonton, 1999, 2008; Gudnundsdottir, 1991; Langer, 2001; Ostrowski, 2000). This study addressed these research limitations by examining teacher perspectives beyond just a few case studies to explore possible common pedagogical content knowledge themes that may be generalized to a larger audience.

This study utilized a qualitative research model to capture teachers' perspectives of secondary English language arts pedagogical content knowledge. This study took place over

a 10-week period of time during the spring of 2009. Study participants consisted of 12 high school English language arts teachers and teacher mentors who had all been identified as highly effective secondary English language arts practitioners. Using an interview protocol, each study participant discussed with the researcher his or her articulation of subject matter, learners, curricular organization, and topic relevance. The findings of this study summarize the major themes that emerged from these interview data.

Discussion of Findings

Pedagogical content knowledge consists of the ways in which teachers approach both content and pedagogy in relation to their subject-specific practice. Pedagogical content knowledge is reflected in how teachers implement subject-specific representations of knowledge in ways that maximize student learning. To a large extent, the participants of this study articulated secondary English language arts pedagogical content knowledge in terms of specific strategies they implemented to represent knowledge in ways that maximized student learning. While Shulman's (1986) definition of pedagogical content knowledge includes specific ways in which teachers represent subject-specific ideas, explanations, demonstrations, illustrations, examples, and analogies in ways that are comprehensible to others, pedagogical content knowledge also includes a theoretical understanding of subject matter, the realities of student learning (i.e. specific learning challenges within a subject area, students' developmental capabilities, and common misconceptions of learning certain topics within a subject area), curricular organization within a subject area, and knowledge of relevance of topics to include in the curriculum (Wilson, Shulman, & Richert, 1987).

Participants in this study, however, largely failed to articulate these theoretical

aspects of pedagogical content knowledge. There may be a few reasons why study participants failed to articulate their English language arts pedagogical content knowledge in these ways. One possibility is that some of the interview questions focused on asking teachers to articulate their implementation of specific instructional strategies rather than for their conceptual articulation of English language arts as an academic discipline. Another possibility is that though many of the research questions provided study participants with the opportunity to articulate their knowledge of subject matter, learners, curricular organization, and topic relevance, teachers chose to articulate more generalized aspects of pedagogical content knowledge that they then connected to the implementation of specific strategies that supported student learning processes.

This study's findings support previous case study research of secondary English language arts teachers' articulation of specific instructional practices that maximize student-opportunities (Agee, 1998; Flynn, 2007; Kleinfeld, 1992; Langer, 2001; Ostrowski, 2000). These findings also extend previous research that has called for specific examination of English language arts teachers' thinking in regard to the development and implementation of connected and coherent subject-specific curriculum (Dudley-Marling, Abt-Perkins, Sato, & Self, 2006). For example, previous research has indicated pedagogical content knowledge for teaching literature, reading, and writing as essential to being a highly effective English language arts teacher; this study identified teachers' articulation of a number of specific strategies. The findings of this study support previous research that indicates highly effective teachers possess a substantial foundation of knowledge for the ways they think about and implement their subject-specific instruction (Fives & Buehl, 2008; Kagan, 1992). Findings

also align to elementary and secondary English language arts research that suggests this foundation is influenced by knowledge of content (subject-specific subject matter), and context (teaching in relation to school context, diverse student learning populations, understanding of student learning realities) (Agee, 1998; Grossman, 1989; McDiarmid & Ball, 1989; Phelps & Schilling, 2004). The remainder of this section discusses the findings gleaned from this study and are arranged according to the four research questions of this study.

Research Question One

For the first research question, *In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of how to teach the subject of English language arts in ways that maximize student learning?*, one aspect of pedagogical content knowledge is teachers' knowledge of subject matter and the implementation of effective instructional strategies for teaching particular concepts and topics in ways that maximize student-learning opportunities. The findings of this study largely fail to address secondary English teachers' deep understanding of subject matter knowledge, which according to Shulman, includes knowledge of subject-area content, other content beyond the subject being taught, and curricular knowledge (Shulman, 1987). For example, though many study participants referenced teaching literature, they did not articulate in any detail their knowledge of literature. They also did not articulate an in-depth understanding of curricular knowledge, which Shulman has defined as an understanding of the various instructional resources and teaching materials available within a certain subject area (Shulman, 1987).

Study participants mostly articulated their pedagogical content knowledge of how to secondary teach English language arts in terms of specific strategies they implemented to support students' learning processes. The prevalent theme that emerged for subject area pedagogical content knowledge was making the invisible visible, the ways in which teachers attempted to make abstract English language arts concepts and skills more tangible. Thus, teachers discussed maximizing student-learning opportunities by implementing various strategies for making abstract concepts and skills visible to student in ways that supported their learning. In all occasions that teachers described making the invisible visible, the structure that the teachers discussed involved a tangible teaching and learning process. These tangible examples of making the invisible visible included implementing the use of examples, models, physical classroom activities, and peer and self-assessments as ways of providing both explicit instruction and scaffolding opportunities for students to move toward a concrete understanding of English language arts skills and concepts. These findings are in alignment with research that suggests real understanding extends beyond memorized information and regurgitation of facts to the kinds of thinking that facilitate the construction of ideas, deep understanding of complex and abstract concepts that are essential for today's learner to function successfully in modern society, that students learn by doing, and that the implementation of both collaborative and individual assessment strategies provides students with extensive feedback that informs their learning and overall skills development (Tapscott, 2009; Zemelman, Daniels, & Hyde, 2005). These findings also align with research that indicates teachers' thinking about teaching and learning is contextualized to specific teaching actions in relation to the topic or content being presented rather than general conceptions of teaching (Eley, 2006).

Research Question Two

For the second research question, *In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of learners?*, study participants also articulated pedagogical content knowledge of the learner in terms of specific strategies they used to support their students' academic development. Pedagogical content knowledge of the learner includes an understanding of students' specific learning challenges within a particular subject, an understanding of students' learning development levels, overall capabilities, and possible misconceptions of learning certain topics within a subject area (Wilson, Shulman, & Richert, 1987). Though the teachers did reference some of these aspects of knowledge of the learner, they did so by connecting these aspects to specific strategies they implemented.

For pedagogical content knowledge of the learner, three themes emerged: (1) personal connections, (2) real-life relevancy, and (3) multiple access points. Teachers identified the first emergent theme, making personal connections, as a strategy for teaching students important concepts such as theme and paragraph structure. This theme included making personal connections to students' life experiences and incorporating personal choice into the curriculum. Teachers provided personal choice by encouraging students to generate their own discussion questions, writing topics, independent reading texts, and small group and whole class discussions. Teachers felt that making personal connections provided a foundational structure for students to comprehend these important concepts and skills. These findings support research that indicates that providing students with choice topics is central to making scientific investigation relevant to student learning (Mosely, Ramsey, & Ruff, 2004).

The second theme that teachers articulated for pedagogical content knowledge of learners was real-life relevancy. This consisted of (1) strategies for connecting classroom curriculum to the real world beyond students' own immediate life experiences, and (2) making connections to current events and students' own personal interests. Teachers stated that these connections were vital for motivating students to care about the topics, the understanding that students were learning the topics for a relevant reason, and finding personal meaning in what students were learning. A third theme that emerged for pedagogical content knowledge of the learner was providing all students with multiple access points to the curriculum. All of the teachers discussed the need for understanding students' learning differences and implementing specific strategies that would help students gain access to the course material. Examples of these multiple access point strategies included activities that encouraged the development of critical thinking skills, flexible grouping, using visual reinforcements, modifications, assessments, and collaboration.

These findings of real-life relevancy and providing multiple access points to the curriculum support the research that suggests that as teachers gain expertise, they align their instructional strategies to students' learning realities, needs, and context-specific thinking and problem solving (Dershimer & Kent, 1999; Kagan, 1992). These findings also aligns to research on Millennials and Net Gen learners, students of this generation who are described as experiential learners who learn via hands-on, active learning opportunities and are accustomed to experiential learning processes. These students also are used to receiving immediate and ongoing feedback regarding their academic progress (Sweeney, 2006; Tapscott, 2009).

Findings in this section also support best-practices research that indicates that highly effective teachers implement student-centered curriculum that addresses the real, whole lives of students by recognizing and validating students' own individual interests and frameworks of experience (Zemelman, Daniels, & Hyde, 2005). Finally, findings in this section also support the research that has considered how assessment has guided teachers' instructional decisions as they examine daily and long-term assessments (Brickhouse, 1993).

Research Question Three

For the third research question, *In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of curricular organization?*, study participants articulated their pedagogical content knowledge of curricular organization by discussing the overarching structure of how they organized units and individual lessons. Curricular organization is an understanding of the various ways in which to organize the teaching of a discipline (Wilson, Shulman, & Richert, 1986). In secondary English language arts, for example, a teacher might organize his or her curriculum according to various genres of literature, and in doing so, might organize various types of reading, writing, listening, and speaking activities around this literature. Some of the study participants did discuss curricular organization in terms of how they would organize certain aspects of their curriculum around specific themes and literary texts. The study participants who articulated this type of curricular organization, however, did not elaborate on why they would organize certain concepts and skills around these specific themes and works of literature.

Most of the study participants chose to articulate curricular organization of English language arts according to how the overarching structure they would use to plan a unit or

lesson rather than by describing the ways in which they would organize specific aspects of the English language arts curriculum. Examples of these unit and lesson structures include using planning models such backward design using an into, through, and beyond planning approach, and organizing course content around a specific skill, such as critical thinking.

All of the teachers who participated in this study had their own systems for organizing various units and lesson plans. Each teacher had developed a concrete structure for how he or she organized the course material and presented it to students in ways that maximized learning opportunities. For example, all 12 of the teachers discussed organizing units around a specific end-in-view for the skills and concepts they wanted students to learn. In terms of individual lesson plans, all of the teachers described a lesson plan structure that included some sort of introduction, scaffolded activities, and a conclusion. For some teachers, this lesson planning structure evolved over time and years of experience. Others discussed the influence of professional development on how they thought about and approached their units and lesson plans. This supports the research that suggests that teachers may alter their pedagogical beliefs as a result of learning and professional development experiences (Brighton, 2003; Speer, 2008). In addition to the actual structure of a unit or lesson plan, teachers devised teaching strategies that supported organizing course content in ways that promoted the development of critical thinking skills. This finding extends the research base that has called for a need to examine the explicit ways in which teachers support the development of critical thinking skills so that students may become more critically literate (Wright, 2007).

Research Question Four

For the fourth research question, *In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of which topics to include in the curriculum?*, teachers articulated their pedagogical content knowledge of topic relevance by identifying specific topics they felt were essential to include in their English language arts classroom instruction, such as writing, reading, and vocabulary. Almost all of the study participants failed to articulate a specific rationale for including writing and vocabulary as relevant topics. For example, teachers identified expository writing as a topic to include in the curriculum. The teachers then described some of the elements of an expository piece of writing, such as developing a thesis statement and supporting it with evidence. They then did not elaborate as to why these aspects of expository writing were essential to include in the curriculum. Instead, the teachers described their processes for including writing, vocabulary, and reading in the curriculum (such as connecting writing topics to the literature students were reading). A few study participants did identify one rationale for teaching writing, which included writing for a specific audience as a foundational writing skill students needed to learn.

Only one teacher articulated why vocabulary was essential component of English language arts instruction. For the theme of vocabulary development, teachers placed an emphasis on the strategy of teaching vocabulary within a context so that students would retain and synthesize the words in contrast to rote memorization. Examples of context included teaching vocabulary that appeared in the literature that students were reading, words that students would encounter in real-life situations, and application of academic vocabulary to students' own writing. This finding aligns with research that indicates that teachers'

thinking about teaching and learning is contextualized to specific teaching actions in relation to the topic or content being presented rather than general conceptions of teaching (Bell, 2007; Eley, 2006).

For the topic of reading, however, participants did provide more detailed rationales for the reading topics they chose. This included explanations such as incorporating an independent reading component into the class to promote students' exploration of texts for the purposes of interest and enjoyment, exposing students to significant pieces of literature that were not covered in the existing curriculum, and using texts that supported students' access to the skills, state standards, and the context of the reading selections. Many of the teachers' English language arts curriculum was literature-based, and as such, they connected the writing topics they taught directly to the literature they were reading and analyzing. Teachers also placed importance on writing as an essential skill for personal expression. These findings support the research that essential components of topic relevance include opportunities for students to articulate thoughts and ideas in relation to the topic being studied (Ostrowski, 2000). An additional finding for topic relevance was study participants' discussion of the influence of school context on the topics they included in their curriculum. The overarching school contextual factor that teachers identified was district-mandated or prescribed curriculum. This supports the research that indicates teachers' perceptions about reading and reading instruction are impacted by school and/or district-mandated reading programs (Richards, 2001).

For the theme of reading, teachers implemented reading as a means of engaging students in the reading process, as well as teaching students to be active and critical readers. These findings extend the research that has explored the implementation of teaching

strategies that facilitate students becoming more engaged readers (Schoenbach, Greenleaf, Cziko, & Hurwitz, 1999). Finally, for the theme of school context, the findings indicated that teachers' individual school contexts influenced the topics that they included in their curriculum. This finding aligns with previous research that suggests that contextual factors influence teachers' instructional beliefs (Muchmore, 2001).

Implications

Instructional Implications

The findings of this study align with some aspects of Shulman's (1986, 1987) conceptualization of pedagogical content knowledge. According to Shulman, pedagogical content knowledge consists of the ways in which teachers approach both content and pedagogy in relation to their subject-specific practice and is reflected in how teachers implement subject-specific representations of knowledge in ways that maximize student learning. This study of teachers' articulation of secondary English pedagogical content knowledge makes explicit a number of specific teaching strategies that highly effective teachers implement to provide maximum learning opportunities for all students. Additionally, the findings of this study provide insight into the educational community's understanding of the four aspects of pedagogical content knowledge identified by Wilson, Shulman, and Richert (1987).

Previous research has pointed out that pedagogical content knowledge is difficult to measure due to the interconnected nature of the pedagogical content knowledge aspects of subject matter, learner, curricular organization, and topic relevance (Gess-Newsome, 2002; McDiarmid, & Ball, 1989). This study's findings suggest that, despite the interconnected nature of these four pedagogical content knowledge aspects, it is possible to analyze, to some

extent, teachers' articulation of each individual aspect of pedagogical content knowledge. It is important to note that there is overlap between each pedagogical content knowledge element in the findings of this study. However, the researcher organized the data according to which of the four pedagogical content elements appeared to be the most central in each teacher's articulation of specific teaching strategies. For example, while implementing a writing portfolio as a strategy for supporting students in setting, revising, and achieving their writing goals involves pedagogical content knowledge of the learner, the central focus of this strategy implementation in the data analysis appeared to be on how to teach writing in a way that was accessible to learners. In this way, implementing a writing portfolio is aligned with the pedagogical content knowledge aspect of subject matter in articulating a strategy for how to teach writing. Similarly, implementing the strategy of having students work collaboratively in groups to create a visual representation of a literary symbol might also be an example of pedagogical content knowledge of the learner. In this example, the teacher participant implemented a strategy that focused on both auditory and visual learning. However, this is primarily an example of how to teach symbolism, where the focus again is on how to teach the subject matter in a way that promotes student access to learning and mastering the concept.

These findings also suggest implications for beginning teacher practice and the professional development programs that support these teachers' development in becoming highly effective educators. California BTSA programs are designed to provide beginning teachers with professional development opportunities that enable them to teach a culturally, linguistically, and academically diverse student population in ways that maximize student learning opportunities. The foundational element of all California BTSA programs entails

beginning teachers engaging in a series of professional development activities that promote their professional growth in how they approach teaching their subject area in ways that provide access to the curriculum for all learners. To a large extent, these professional development activities consist of ongoing formative assessment and individualized support from a teacher mentor.

Together with their mentors, beginning teachers complete a series of formative assessment tools that promote teachers' professional growth in how they think about and approach their practice. About half of the formative assessment tools themselves do contain some of the specific instructional strategies that teachers identified in this study. Some examples of these include (1) lesson plan templates that include an introduction, instructional activities, and a conclusion (2) a backwards design lesson plan template, (3) a differentiation of instruction lesson plan template, (4) lesson plan templates that focus on providing English learners and special populations with equal access to course material, (5) a flexible grouping protocol where beginning teachers determine how to group their students to maximize learning opportunities, and (6) analyzing student work protocol, in which the teacher pre-assesses student understanding before implementing an activity or final assessment, articulates learning goals, implements an activity or assessment, and examines student artifacts to analyze levels of individual students' concept and skills mastery connected to the learning goals.

The other strategies identified in this study are not explicitly part of the BTSA formative assessment system program framework for beginning teachers, however. These include explicit strategies such as examples, models, physical activities, and peer and self assessments to make learning processes and concepts visible to students, strategies that focus

on personal connections and real-life relevancy in regard to students, and visual reinforcements and collaboration as strategies for providing multiple access points to the curriculum. Though many teacher mentors may recommend the implementation of these strategies to their beginning teacher mentees, they remain largely implicit within the organization and implementation of the BTSA program, for it is up to the teacher mentor to suggest the implementation of specific instructional strategies, such as the ones identified in this study. Additionally, there is no framework within the BTSA program that contains specific instructional strategies that maximize student-learning opportunities for any individual discipline. Findings from this study, therefore, contribute to the creation of a possible BTSA framework of specific secondary English language arts instructional strategies that maximize student-learning opportunities.

Findings of this study also make explicit specific teaching strategies that may support today's Millennial learner. The advent of technological advances (computers, the Internet, cell phones, digital/downloadable music) over the past three decades has contributed to the creation of this new generation of learners, who are considered to be the most "technically literate, educated, and ethnically diverse generation in history" (Eisner, 2005). The findings of this study included teaching strategies, such as making the invisible visible, implementing peer and self assessments, providing multiple access points to the curriculum, incorporating collaborative learning activities, and facilitating the active construction of ideas and deep understanding of concepts. These findings align with the current research that describes this generation of learners as experiential learners who prefer to learn via hands-on, active learning opportunities and are accustomed to immediate and ongoing feedback regarding their academic progress (Sweeney, 2006).

Implementing tangible teaching and learning processes, such as examples, models, and physical classroom activities, helps to make abstract concepts and skills visible to students whose learning levels and processes of development vary. It also provides explicit scaffolding tasks to help students move toward their own learning independence. Peer and self assessments, such as peer and self editing, critiquing, identifying next steps, and setting learning goals, are ways that teachers can make the writing process visible to students. Implementing strategies that make personal and relevant connections to student learners provide motivational opportunities for students to care about the topics, understand that they are learning the topics for a relevant reason, and find personal meaning in what they are learning. Providing multiple access points to the curriculum through activities that encourage the development of critical thinking skills, flexible grouping, visual reinforcements, modifications, assessments, and collaboration are ways that teachers can understand students' learning differences and implement specific strategies that may help students gain access to the course material.

Organizing course materials within a concrete unit or lesson plan structure that focuses on developing and implementing units and lessons around a specific end-in-view supports the development of skills and concepts teachers wish students to learn. Identifying writing, vocabulary development, and reading as three primary topics to include in the English language arts curriculum may help teachers devise strategies for making connections between writing topics and the literature they are reading and analyzing in class, devising ways to teach vocabulary within a specific context, and implementing reading strategies that place emphasis both on engaging students in reading for their own enjoyment as well as to become more active and critical readers. Finally, understanding the context of the classroom

may inform the ways in which teachers consider the most relevant topics to include in the secondary English language arts curriculum.

Limitations

As with all research, this study contained various limitations. First, all of teachers who participated in this study either currently were or in the past had been BTSA mentors to beginning teachers. While BTSA was an effective tool for screening appropriate study participants, their BTSA mentoring training and professional development may have influenced, to some extent, participants' responses. A second possible limitation to this study was that not all of the teachers who participated were currently teaching. One study participant retired two years ago, while another had left teaching 10 years ago to oversee the district's BTSA program. However, though both of these study participants had left their own classroom practice, they were still currently mentoring beginning teachers and were thus connected to schools and classrooms in a mentoring capacity that included guest teaching in their mentees' classrooms, as well as observing their mentees' daily teaching practice on a regular basis.

Another limitation to this study was generalizability. Though this study contained participants from various parts of the San Francisco Bay Area, the final participant number was limited to 12. A larger participant pool might be needed in order to make this study generalizable to the larger high school English language arts teaching community.

A final limitation to this study was the possibility of researcher bias. As the study participants knew that the researcher was a secondary English language arts teacher and teacher mentor, they may have made assumptions about the researcher's own knowledge and experience base, which may have influenced their responses to the interview questions. Additionally, the

researcher's own experiences as an English teacher and mentor may have inadvertently added bias to the data collection and analysis.

Recommendations for Future Research

Future research is needed to gain a more in-depth understanding of effective secondary English language arts teachers' pedagogical content knowledge. A future study utilizing a participatory research methodology, for example, would provide an opportunity for the researcher and the study participants to collaborate finding effective ways to address various aspects of pedagogical content knowledge and articulation of these aspects. Additionally, as this study was limited only to the perspectives of high-school level educators who were also mentors to beginning teachers, it is important to replicate this study in order to gain additional data from other teachers outside of the BTSA community who also have been identified as highly effective English language arts educators. This will expand the articulation of English language arts pedagogical content knowledge and may yield additional data regarding how these teachers articulate knowledge of their subject-matter, learners, curricular organization, and topic relevance. A future study that includes additional probing questions may also help teachers further reflect on and articulate their pedagogical content knowledge even more explicitly. Future research that also includes teacher observations may help the researcher obtain additional data regarding the explicit strategies teachers implement in their classrooms that were articulated in this study through teacher interviews. Finally, future research that analyzes teachers' implementation of effective strategies that support student learning would further expand the existing best practices research.

Recommendations for Future Practice

An integral aspect of understanding what and how teachers teach is its relevance to student learning. Today's learners need to become critically literate (Wright, 2007). They require specific skills that will help them look for, analyze, synthesize, and critically evaluate information (Tapscott, 2009). These skills will support them in being successful in today's digital world. Today's teachers need to implement a generative approach of teaching and learning that focuses on a learner-centered approach to education. This includes the learner as an active participant in the construction of knowledge, where the learner participates in collaborative learning, cooperative learning, exploration, inquiry-based learning, and discovery (Cambron-McCabe & Dutton, 2000; Tapscott, 2009). The findings of this study primarily identify effective secondary English language arts teachers' pedagogical content knowledge in terms of specific strategies they implement to represent knowledge in ways that maximize a generative approach to student learning.

The findings of this study include substantial implications for less effective classroom teachers who may spend years attempting to develop a level of expertise without a framework or who may leave the profession entirely despite their potential to develop this expertise by contributing to the foundation for a possible teaching framework. This framework may help these teachers develop this knowledge more quickly and experience greater levels of success at earlier stages in their teaching careers. The articulation of the pedagogical content knowledge of highly effective teachers is only one way to help these teachers identify and make explicit those best English language arts practices that support student learning. Therefore, in addition to the creation of a English language arts teaching strategies framework, it is vital for secondary school districts, administrators, and English

language arts departments to re-examine their current professional development opportunities and align future professional development to support English language arts' teachers development of a foundation of knowledge for the ways they think about and implement their subject-specific instruction in ways that maximize learning opportunities for today's learners. Additionally, school districts that implement prescribed curriculum should re-examine the extent to which the implementation of a prescribed curriculum does or does not provide a depth of instruction that facilitates the development of skills that the teachers perceived to be essential, such as critical thinking and writing skills.

Closing Remarks

Conducting this research study provided me with extremely valuable insights regarding how teachers articulate high school English language arts practice. Throughout planning and implementing this study, I also gained valuable insights about my own journey as an educational researcher, including the valuable learning experiences I gained while collecting my data, my development of skills as a researcher, and possible areas of focus for future research.

As a discipline, high school English language arts is broadly defined. The California state standards include various standards related to the teaching of reading, writing, listening, and speaking. Individual teachers may place different amounts of emphases on each of these four areas in their own classrooms, which may depend on factors such as the context of teachers' school sites, perceptions of students' learning needs, pressure to align curriculum with state-mandated, standardized tests, and teachers' own individual areas of interest and passion within the four sub-categories of the subject area. It may be for all of these reasons that there is no existing model of a specific high school English teaching strategies

framework. Though high school English language arts is broadly defined, this research study did reveal specific ways in which teachers approach high school English language arts research that are valuable to the consideration of a future framework that makes English language arts teaching strategies explicit to the teaching community.

I also gained additional knowledge from each of the teachers I interviewed. All of them were reflective about the ways in which they thought about and approached their own practice. Though I have several years of secondary English teaching experience, I learned from them additional strategies for approaching my own teaching. It was in my own learning process that I realized that the findings of this study may be informative not only for novice or struggling teachers, but also for effective teachers, in further refining their own teaching practices.

All of the study participants described ways in which they considered themselves life-long learners. They learned through collaboration with other colleagues, professional development opportunities, and reflections on and refinements of their own teaching practice. In listening to them articulate their own life-long learning processes, I realized that their self-identification of being life-long learners probably contributed to their effectiveness as teachers and their interest in students' own learning development processes.

I also gained insight regarding how various schools and districts approach the teaching of high school English language arts. Some of the teachers discussed the pressures of teaching to a prescribed curriculum mandated by the school or district and the constraints this created on how they thought about and approached their own practice. Other schools and districts engaged in a collaborative approach to teaching high school English language arts

and how these collaborations enriched their own teaching practice as well as had a positive impact on student learning.

This study also helped me to refine my skills as a researcher. I realized early in the process that it was very challenging for me to refrain from engaging in a conversation with each participant, in part due to my own curiosity or fascination about their teaching practices as well as my desire to share my own teaching experiences. With each subsequent interview, however, I became more accustomed to the essential research skill of remaining as objective as possible. As I became more comfortable with the interview protocol, I relaxed and found myself asking additional probing questions to elicit more explicit thinking from the participants. When I finished my data collection, I found myself wishing I could interview each participant a second time to ask additional probing questions that may have resulted in richer data for my analysis.

I was concerned about the data analysis process for one overarching reason: though pedagogical content knowledge has been defined as a construct and though many researchers since Shulman (1986, 1987) have attempted to provide additional conceptualizations of pedagogical content knowledge, there is overlap for each of the four aspects of pedagogical content knowledge. Circling words in a poem that have been personified, for example, is a strategy for making the invisible visible, but also is an example of a way in which a teacher decides to organize his or curricular lesson. Thus, this example falls into at least two of the four aspects of pedagogical content knowledge. In my second round of data analysis, however, it became obvious to me how the data could be organized and analyzed according to each of the four aspects of pedagogical content knowledge. Though the data in some cases could be applied to more than one category, it became apparent which of the four categories

would provide the most salient analysis for specific data pieces. I conclude this study with an excitement about possible future research that continues to examine ways that teachers articulate their pedagogical content knowledge of secondary English language arts.

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Appendix A: Participant Consent Form

Informed Consent Letter

Title of Study: Experienced High School Language Arts Teachers' Pedagogical Content

Knowledge

Principal Investigator

Donna Hyatt Scarlett
University of San Francisco
Learning and Instruction Department
339 Pierce Street
San Francisco, CA 94117
(415) 321-0835
djhyatt@usfca.edu

Background and Purpose

Mrs. Donna Hyatt Scarlett, a graduate student at the University of San Francisco, is conducting a study on high school English language arts teachers' perceptions of teaching and learning. Please take a few moments to read the following information carefully. Should you require additional clarification or information after reviewing this document, please contact the researcher directly.

You are being asked to participate in this study because you are an experienced high school English language arts teacher.

Procedures

Should I agree to participate in this study, the following shall occur:

1. The researcher will conduct a one-hour interview. The interview will take place at a time and in a place that is convenient for me. If, possible, the interview will be conducted at my school site. Should I agree to participate in the interview, the interview will be tape recorded using an a digital audio recording device. A

transcription of the interview will be sent to me for review to ensure accuracy of the transcript document.

Possible Risks

The risks of participating in this study are minimal. In the event that any of the questions asked during the interview make me uncomfortable, I may decline to answer them. I may also withdraw my participation in this study at any time.

I understand that the researcher will maintain confidentiality; however, I realize that loss of confidentiality is a possibility. No individual identities will be used in the reports or publications that may result from the study. The researcher will keep all information in locked file cabinets or password protected computer files. Only the researcher will have access to these files.

Benefits

My participation in this study will benefit the ongoing research that explores teaching and learning. Results from this study may result in the development of a teaching and learning framework aimed at supporting teacher education students and high school English teachers in their implementation of teaching and learning strategies. Should I participate in the one-hour interview session, I will receive a \$25.00 gift card, which is another potential benefit of my participation in this study.

Costs/Financial Considerations

There will be no costs involved with participating in this study.

Compensation to Participants

Participation the one-hour interview session will result in the receipt of a \$25.00 gift card.

Confidentiality

No individual identities will be used in the reports or publications that may result from the study. The researcher will keep all information in locked file cabinets or password protected computer files. Only the researcher will have access to these files.

Questions

Should I have questions, I will contact the researcher directly. If for any reason I wish to contact the IRBHS office at the University of San Francisco, the office that focuses on the protection of human subjects. I may reach the IRBHS office by phone, email, or in writing.

The pertinent contact information for the IRBHS office is listed below.

IRBHS
University of San Francisco
San Francisco, California 94117
(415) 422-6091
IRBPHS@usfca.edu

Consent

I acknowledge that I have been given the informed consent letter and am free to decline participation in this study or to withdraw from it at any time.

My signature below indicates my agreement to participate in this study.

Participant's Signature

Date

Signature of Researcher

Date

Interview Protocol**Study Title****Experienced High School Language Arts Teachers' Pedagogical Content Knowledge****Time of Interview:****Date:****Place:****Interviewee:****Description of Study** (Review each of the following topics with the interviewee.)

- a.) Study Purpose: The purpose of this study is to explore high school English language arts teachers' perspectives of their teaching practices.
- b.) Data Collection: During this interview, I will ask you questions about your teaching practice. Please answer as honestly and specifically as you can. For the purposes of data collection and analysis, this interview will be recorded using a digital audio device.
- c.) Data Accuracy: After the interview has been transcribed, I will send you the transcript to review to verify accuracy of your responses.
- d.) Interview Length: The interview length is approximately one hour.

Sign the consent form.

Interview Questions

1. How many years have you been teaching high school English language arts?
2. Please tell me about your educational background (i.e. -degrees, teacher education/certification program).
3. Could you describe the process you go through when you plan and teach a lesson?
4. Which English language arts topics do you feel are the most essential to teach?
5. In your classroom, in what ways do students investigate their own interests, and in what ways do these interests align with your instructional objectives?
6. What are specific examples of how students learn by “doing” in your classroom?
7. Please describe one or two examples of ways that you organize units of instruction to support student learning.
8. What are some examples of how you approach teaching challenging concepts such as literary themes, symbols, or complex vocabulary?
9. To what extent do your students choose their own reading or writing topics? *Possible probing questions:* What is the purpose of students choosing their own topics? If they do not choose their own topics, what is the purpose of the topics that you assign to them?
10. Please describe some examples of how students reflect on their own learning.
11. A wealth of research has suggested that learning is an active process where students continually try to make meaning from what they learn. Could you describe some ways that you help students develop their own ideas as they move toward understanding/mastering concepts?
12. What are some specific examples of how you differentiate your instruction to meet the diverse learning needs of your students?
13. What are some examples of ways in which you assess student learning?
14. Students can learn important concepts and content from a teacher presentation or textbook. These ways of learning can be very helpful for students. Students can also learn by taking primary responsibility for identifying and learning the new material. Can you describe some ways in which you ask students to take on responsibility for the learning in this class?
15. Please describe collaborative and individual strategies you use to support student learning.
16. What are some ways in which students establish goals, monitor their learning, and apply the skills they have learned?

Appendix C: Interview Questions Alignment

Research Question	Interview Question Aligned to Research Question	Principle(s) of Best Practice	Additional PCK Element(s) Interview Question Also Addresses
(1) In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of how to teach the subject of English language arts in ways that maximize student learning?	(3) Could you describe the process you go through when you plan and teach a lesson?	Warm-up question	Curricular Organization; Learner; Topic Relevance
	(8) What are some examples of how you approach teaching challenging concepts such as literary themes, symbols, or complex vocabulary?	Authentic	Curricular Organization
	(11) A wealth of research has suggested that learning is an active process where students continually try to make meaning from what they learn. Could you describe some ways that you help students develop their own ideas as they move toward understanding/mastering concepts?	Cognitive; Reflection	Learner
	(13) What are some examples of ways in which you assess student learning?	Expressive	Learner
	(14) Students can learn important concepts and content from a teacher presentation or textbook. These ways of learning can be very helpful for students. Students can also learn by taking primary responsibility for identifying and learning the new material. Can you describe some ways in which you ask students to take on responsibility for the learning in this class?	Social	Learner

Research Question	Interview Question Aligned to Research Question	Principle(s) of Best Practice	Additional PCK Element(s) Interview Question Also Addresses
(2) In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of learners?	(5) In your classroom, in what ways do students investigate their own interests, and in what ways do these interests align with your instructional objectives?	Student-centered	Curricular Organization; Subject-specific; Topic Relevance
	(6) What are specific examples of how students learn by “doing” in your classroom?	Experiential	Learner; Curricular Organization
	(7) Please describe one or two examples of ways that you organize units of instruction to support student learning.	Holistic	Curricular Organization; Subject-specific
	(10) Please describe some examples of how students reflect on their own learning.	Cognitive; Reflection	Subject-specific
	(15) Please describe collaborative and individual strategies you use to support student learning.	Collaborative; Constructivist	Curricular Organization
	(16) What are some ways in which students establish goals, monitor their learning, and apply the skills they have learned?	Democratic	Subject-specific; Curricular Organization
(3) In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of curricular organization?	(9) To what extent do your students choose their own reading or writing topics? <i>Possible probing questions:</i> What is the purpose of students choosing their own topics?	Challenging	Subject-specific; Topic Relevance; Learner

	If they do not choose their own topics, what is the purpose of the topics that you assign to them?		
Research Question	Interview Question Aligned to Research Question	Principle(s) of Best Practice	Additional PCK Element(s) Interview Question Also Addresses
(4) In what ways do experienced secondary English language arts teachers articulate their pedagogical content knowledge of which topics to include in the curriculum?	(4) Which English language arts topics do you feel are the most essential to teach?	Authentic	Topic Relevance