The Beliefs Literacy Specialists Hold Regarding Processes that Assist Struggling Readers with the Comprehension of Informational Text

Marguerite Haldin

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THE BELIEFS LITERACY SPECIALISTS HOLD REGARDING PROCESSES THAT
ASSIST STRUGGLING READERS WITH THE COMPREHENSION OF
INFORMATIONAL TEXT

A Dissertation
Submitted to the School of Education

Duquesne University

In partial fulfillment of the requirements for
the degree of Doctor of Education

By
Marguerite Hannah Haldin

December 2019
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Marguerite H. Haldin

2019
THE BELIEFS LITERACY SPECIALISTS HOLD REGARDING PROCESSES THAT ASSIST STRUGGLING READERS WITH THE COMPREHENSION OF INFORMATIONAL TEXT

By

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Approved October 17, 2019

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ABSTRACT

THE BELIEFS LITERACY SPECIALISTS HOLD REGARDING PROCESSES THAT ASSIST STRUGGLING READERS WITH THE COMPREHENSION OF INFORMATIONAL TEXT

By
Marguerite Hannah Haldin
December 2019

Dissertation supervised by Dr. Connie M. Moss, Ed.D.

Children have a basic human right to read. It is the evolving work of the reading/literacy specialists to provide support and build confidence in readers struggling in all components of reading. The purpose of this study is to explore the beliefs of reading/literacy specialists regarding the processes that assist struggling readers with the comprehension of informational text. The methods used were designed to address the research question: What are the beliefs reading/literacy specialists hold regarding processes that assist struggling readers with the comprehension of informational text?

Nineteen members of a professional learning group from an intermediate unit in Southwestern Pennsylvania, the Reading Specialist Network Role-Alike Group (RSNRG), participated in the study. Data were collected via an online response form, that asked the participants to diagnose and make suggestions regarding the work of a 7th
grade student who was challenged to summarize a short piece of informational text. Participants also responded to ten Likert-Scale questions regarding their professional backgrounds. Both qualitative and quantitative methods were employed to analyze the data. Frequency counts were used to analyze, report, and interpret information from each demographic question. For the open-ended prompts, the general interpretive process of close reading was used to analyze the responses from the reading specialists. The following five themes emerged from the analyses: 1. Heavy Reliance on Basic Decoding Approaches to Reduce Cognitive Demands; 2. Reliance on Encoding Approaches That Are More Teacher-Involved Than Student-Involved; 3. Perceived Positive Self-Efficacy for Their Individual Knowledge and Impact as Reading Specialists; 4. Shared Belief that Reading/Literacy Specialists are Knowledgeable and Competent Professionals; 5. The Mechanics of Reading Foster Reading Comprehension More than the Metacognitive Processes Students Use to Comprehend Informational Text. The findings indicate a need for reading/literacy specialists to continue to collaborate, explore, and share strategies that foster metacognitive processes as important interventions for struggling learners. To address the findings, the study concludes with recommendations for reading specialists.
DEDICATION

I dedicate my work to God, for without Him, this work would not be possible.

In a special way, I dedicate this work to my hard-working grandfather, Thomas A. Oeler, who always told me, “If you can read, you can do anything.” His words resonated with me and pushed me to advocate for literacy among all ages.
ACKNOWLEDGEMENT

To my fearless leader, supporter, cheerleader, and realist, Dr. Connie Moss.
Thank you for the countless hours of work you invested on my behalf. To my committee members who supported and encouraged the rigor and development of this work: Dr. McCown, thank you for shepherding my study’s design. Dr. Nemeth, your expertise as a reading specialist was invaluable to every aspect of this study and your careful editing of my work elevated it. The members of the Cohort of 2019 have personally and professionally impacted my life in ways that cannot be matched. Thank you to my parents and siblings, who have always inspired me to reach for the stars and dream big, implementing small changes in a big way. To Kristin and Cassie – two friends who share my passion for literacy, teaching, and learning – thank you to always being just a phone call away. Additionally, I thank my encouraging and supportive family, friends, neighbors, and colleagues who have supported my efforts. Thank you especially to my husband, Sean, for his patience, loving support, and gentle nudges to keep moving forward.
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>iv</td>
</tr>
<tr>
<td>Dedication</td>
<td>vi</td>
</tr>
<tr>
<td>Acknowledgement</td>
<td>vii</td>
</tr>
<tr>
<td>List of Tables</td>
<td>x</td>
</tr>
<tr>
<td>List of Figures</td>
<td>xi</td>
</tr>
<tr>
<td>Chapter 1: Rationale for Study</td>
<td>1</td>
</tr>
<tr>
<td>Social, Cultural, and Historical Perspectives on the Problem</td>
<td>1</td>
</tr>
<tr>
<td>Local Contextual Perspectives on the Problem</td>
<td>3</td>
</tr>
<tr>
<td>Chapter 2: Review of Literature</td>
<td>6</td>
</tr>
<tr>
<td>The Role of the Reading Specialist</td>
<td>6</td>
</tr>
<tr>
<td>Teacher Beliefs</td>
<td>14</td>
</tr>
<tr>
<td>Teacher Beliefs and Teacher Self-Efficacy</td>
<td>18</td>
</tr>
<tr>
<td>Collective Teacher Efficacy</td>
<td>18</td>
</tr>
<tr>
<td>Self-Regulation</td>
<td>25</td>
</tr>
<tr>
<td>Metacognition</td>
<td>27</td>
</tr>
<tr>
<td>Metacognitive and Cognitive Strategies Used to Comprehend</td>
<td>33</td>
</tr>
<tr>
<td>Informational Text</td>
<td>45</td>
</tr>
<tr>
<td>Teacher Beliefs Regarding the Teaching of Informational Text</td>
<td>51</td>
</tr>
<tr>
<td>Chapter 3: Methodology</td>
<td>54</td>
</tr>
<tr>
<td>Introduction</td>
<td>54</td>
</tr>
<tr>
<td>Methodology</td>
<td>55</td>
</tr>
</tbody>
</table>
Procedures ........................................................................................................ 56
Selection and Recruitment of Participants ...................................................... 57
Instruments ........................................................................................................ 58
  Part One: Demographic Information .............................................................. 59
  Part Two: Response to the Vignette ............................................................... 62
Chapter 4: Findings .......................................................................................... 65
  Overview ......................................................................................................... 65
  Part One: Demographic Data Analysis ........................................................... 66
  Part Two: Response to Vignette Analysis ....................................................... 80
Chapter 5: Discussion of Findings .................................................................... 107
  Insights of the Roles that Beliefs Play ............................................................ 107
  Contributions to the Field of Educational Leadership ................................. 115
  Recommendations ........................................................................................ 116
  Implications ................................................................................................... 117
  Limitations ..................................................................................................... 119
  Implications for Personal Leadership Agenda and Growth .......................... 120
References ......................................................................................................... 122
Appendix A ........................................................................................................ 136
Appendix B ........................................................................................................ 140
Appendix C ........................................................................................................ 141
Appendix D ........................................................................................................ 142
Appendix E ........................................................................................................ 145
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table Number</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Summary of Changes in the Reading Specialist (PK-12) Certification</td>
<td>9</td>
</tr>
<tr>
<td>2.2</td>
<td>Three Unique Roles of Specialized Literacy Professionals</td>
<td>10</td>
</tr>
<tr>
<td>2.3</td>
<td>Comprehension Models and Frameworks Organizational Chart</td>
<td>36</td>
</tr>
<tr>
<td>2.4</td>
<td>Operational Definitions of Informational Text</td>
<td>48</td>
</tr>
<tr>
<td>4.1</td>
<td>Frequency Count of Question 1</td>
<td>66</td>
</tr>
<tr>
<td>4.2</td>
<td>Frequency Count of Question 3</td>
<td>68</td>
</tr>
<tr>
<td>4.3</td>
<td>Frequency Count of Question 4</td>
<td>68</td>
</tr>
<tr>
<td>4.4</td>
<td>Frequency Count of Question 5</td>
<td>69</td>
</tr>
<tr>
<td>4.5</td>
<td>Frequency Count of Question 6</td>
<td>71</td>
</tr>
<tr>
<td>4.6</td>
<td>Frequency Count of Question 6 (continued)</td>
<td>72</td>
</tr>
<tr>
<td>4.7</td>
<td>Frequency Count by Category of Question 10</td>
<td>82</td>
</tr>
<tr>
<td>4.8</td>
<td>Individual Responses from Participants of Question 10</td>
<td>85</td>
</tr>
<tr>
<td>4.9</td>
<td>Frequency Count by Category of Question 11</td>
<td>87</td>
</tr>
<tr>
<td>4.10</td>
<td>Individual Responses from Participants of Question 11</td>
<td>89</td>
</tr>
<tr>
<td>4.11</td>
<td>Frequency Count by Category of Question 12</td>
<td>91</td>
</tr>
<tr>
<td>4.12</td>
<td>Individual Responses from Participants of Question 12</td>
<td>92</td>
</tr>
<tr>
<td>4.13</td>
<td>Participants Who Noted Approach to Help a Student</td>
<td>95</td>
</tr>
<tr>
<td>4.14</td>
<td>Key Words or Phrases used in Participants Response to Question 12</td>
<td>96</td>
</tr>
<tr>
<td>4.15</td>
<td>Individual Responses from Participants of Question 13</td>
<td>100</td>
</tr>
<tr>
<td>4.16</td>
<td>Individual Responses from Participants of Question 14</td>
<td>104</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Hypothesize Model of Perceived Collective Teacher Efficacy</td>
<td>22</td>
</tr>
<tr>
<td>4.1</td>
<td>Frequency Count of Question 2</td>
<td>67</td>
</tr>
<tr>
<td>4.2</td>
<td>Frequency Count of Question 6</td>
<td>71</td>
</tr>
<tr>
<td>4.3</td>
<td>Circle Graph of Participant’s Response to Question 7</td>
<td>74</td>
</tr>
<tr>
<td>4.4</td>
<td>Bar Graph with Question 8 Frequency Count of Time Spent with Teachers</td>
<td>75</td>
</tr>
<tr>
<td>4.5</td>
<td>Bar Graph with Question 8 Frequency Count of Time Spent with Students</td>
<td>76</td>
</tr>
<tr>
<td>4.6</td>
<td>Bar Graph with Question 8 Frequency Count of Time Spent with Parents</td>
<td>77</td>
</tr>
<tr>
<td>4.7</td>
<td>Bar Graph with Question 8 Frequency Count of Time Spent with Administrators</td>
<td>78</td>
</tr>
<tr>
<td>4.8</td>
<td>Bar Graph with Question 8 Frequency Count of Time Spent with Others</td>
<td>79</td>
</tr>
<tr>
<td>4.9</td>
<td>Circle Graph with Question 9: Specialist’s Favorite Genre</td>
<td>80</td>
</tr>
<tr>
<td>4.10</td>
<td>Bar Graph with Question 13 Frequency Count of Confidence Levels</td>
<td>100</td>
</tr>
<tr>
<td>4.11</td>
<td>Participant’s Responses to Question 14</td>
<td>103</td>
</tr>
</tbody>
</table>
Chapter 1

Rationale for Study

Social, cultural, and historical perspectives on the problem

The comprehension of informational text is an essential skill needed in all areas of social and economic growth and remains a difficulty for struggling readers. It is the work of the education system, more specifically the reading specialist, to implement evidence-based practices to build and mold literate, attentive readers in society. Reardon, Valentino, & Shores (2012) provide perspective for implementation. “[For] reading comprehension—integrating background knowledge and contextual information to make sense of a text—requires a set of knowledge-based competencies in addition to word-reading skills. By the standards used in various large-scale literacy assessments, only about a third of U.S. students in middle school possess the knowledge-based competencies to “read” in this more comprehensive sense” (p.17). In the article, Patterns of Literacy among U.S. Students, Reardon et al. define literacy as “the ability to access, evaluate, and integrate information from a wide range of textual sources” (Reardon, Valentino, & Shores, 2012, p. 18).

Although various studies and theories suggest the source of this cause of illiteracy, Hattie (2018) points to the largest disparity within a school, which is variability in instructional effectiveness among teachers. This disparity may first begin with the specific set of teacher beliefs that lead each teacher to the instructional decisions they make in teaching students how to comprehend informational text. The beliefs of both teachers and reading specialists alike are later explored in Chapter 2. Because of this widespread illiteracy and disparity in teacher effectiveness, a need arises to further
investigate the beliefs reading specialists hold regarding the metacognitive processes that assist struggling readers with the comprehension of informational text.

A U.S. student’s most rapid development of literacy skills is in the elementary and middle school years (Reardon et al., 2012). It is during these years that a child learns the five major components of reading: “phonological awareness/phonemic awareness, word study/phonics, vocabulary, fluency, and comprehension” (Tindall & Nisbet, 2010, p. 2). The component of reading addressed in this study is comprehension. The five components are derived from the National Reading Panel, which discussed evidence-based assessment of the scientific research literature on reading and its implications for reading instruction (National Reading Panel, 2000). Students who are not making adequate progress as defined by an assessment score, or an average across several scores (Fuchs & Fuchs, 2002), are then referred to remedial reading services, or are given additional accommodations and modifications to meet the child’s needs. Typically, this intervention is performed by a certified reading specialist. However, this process varies within each school system.

Historically, the role of the reading specialist has evolved throughout the past few decades, with an increasing leadership role within schools. Prezyna, Garrison, Gold, and Lockte (2017) explain this evolution beginning with the Elementary and Secondary Education Act (ESEA) of 1965 that created Title 1 reading instruction. The reauthorization of this legislation in 2001 funded literacy coaches and shifted their focus from simply teaching struggling readers to also providing professional development and support to classroom teachers. As the role of the reading specialist became increasingly complex, the International Literacy Association (ILA), formerly known as the International Reading Association [IRA]) “published a statement in 2000 and established
standards in 2010 that outlined the instruction, assessment, and leadership roles of the reading specialist as a change-agent of classroom practice to improve the achievement of all readers” (Prezyna, Garrison, Lockte, & Gold, 2017). The role of the reading specialist is further discussed in the following chapter.

Reading specialists are instrumental in helping a struggling reader harness the power of their own mind and think metacognitively. Typically, good readers are metacognitive in their thinking before, during, and after reading. It follows then that teachers of struggling readers should facilitate the process of comprehension through fostering metacognitive processing (Harvey & Goudvis, 2013). Metacognitive practices increase students’ abilities to transfer or adapt their learning to new contexts and tasks (Bransford, Brown, Cocking, & National Academy of Sciences, 2000; Palincsar & Brown, 1984). Flavell’s (1979) seminal research on metacognitive knowledge, experience, goals, and actions (strategies) laid a strong foundation upon which to build the idea of comprehending informational text within a struggling reader. The complex processes that occur when students are selecting and using metacognitive strategies allow readers to self-regulate learning. In order to impact comprehension, however, these strategies require explicit modeling from the teacher and/or reading specialist in order to provide students with a greater understanding of the concept of metacognitive strategies that have the greatest potential to improve comprehension.

**Local contextual perspectives on the problem**

As a reading specialist in an intermediate unit in southwestern Pennsylvania, the researcher provides remedial reading support for students in grades K-12. There are specifically designed interventions, such as Orton-Gillingham (Orton-Gillingham, 2018),
that are in place for younger students struggling with the phonics and phonological awareness components of reading. Interventions for students in the middle and upper grades who struggle with comprehension are carefully crafted to meet the ever-changing needs of a learner struggling to comprehend. There are working frameworks that place teaching and learning in a cycle of growth and development, with effective teaching at the center. These frameworks are listed in Table 2.2 to provide a full picture of the year of publication, names of the researcher(s), name of the model/framework, and strategies included in the model/framework.

As reading specialists are seen as leaders (Bean, 2015) within schools, it remains essential for the role of the reading specialist to continually provide insight to classroom teachers that increases the rigor and daily lessons that students receive. Although some reading specialists serve solely in the capacity of interventionist, they remain in a position to impact schoolwide practice through modeling lessons and demonstrating a high level of excellence within their intervention classroom. Both the teacher’s self-efficacy and collective teacher efficacy are to be considered as well.

The specific problem of practice that this dissertation addresses is framed by the following research question: What are the beliefs that reading/literacy specialists hold regarding processes that assist struggling readers with the comprehension of informational text? The chapter that follows reviews the following topics in the literature related to the research question: 1) the role of the reading specialist, 2) teacher beliefs, teacher self-efficacy, collective teacher efficacy, and self-regulation 3) metacognition, 4) metacognitive and cognitive strategies used to comprehend, 5) informational text, and 6) teacher beliefs regarding effective ways to teach informational text.
Also included in the chapter is a context review of the history, politics, and policies that guide the work of reading specialists. In addition, the context review focuses squarely on the professional development opportunities currently in place for reading specialists in Allegheny County in Western Pennsylvania.
Chapter 2
Review of the Literature

The chapter reviews relevant theoretical and empirical literature related to the following research question: What are the beliefs reading/literacy specialists hold regarding processes that assist struggling readers with the comprehension of informational text? The topics explored in the literature review include: 1) the role of the reading specialist, 2) teacher beliefs, 3) metacognition, 4) metacognitive and cognitive strategies used to comprehend, 5) informational text, and 6) teacher beliefs regarding effective ways to teach informational text. The review that follows provides context and support for the current study that examines the beliefs of reading specialists who work with struggling readers.

The Role of the Reading Specialist

The reading specialist role has evolved throughout the years as legislation, media attention, and funding have shaped their unique role within schools. Prezyna, Garrison, Lockte, & Gold (2017) explain this evolution beginning with the Elementary and Secondary Education Act (ESEA) of 1965 that created Title 1 reading instruction. Throughout the years, the federal government has invested in large-scale programs to support reading instruction that included Heat Start, Reading First, the professional development initiative of No Child Left Behind (U.S. Department of Education, 2002), Race to the Top (American Recovery and Reinvestment Act of 2009, Public Law No 111-5, 2009, and other school improvement programs (Bean, 2015). The reauthorization of this legislation in 2001 funded literacy coaches and shifted their focus from teaching struggling readers to also providing professional development and support to classroom
teachers. As the role of the reading specialist became increasingly complex, the International Literacy Association (ILA), formerly known at the International Reading Association [IRA]) “published a statement in 2000 and established standards in 2010 that outlined the instruction, assessment, and leadership roles of the reading specialist as a change-agent of classroom practice to improve the achievement of all readers” (Prezyna, Garrison, Lockte, & Gold, 2017).

More recently, a Standards Revision Committee composed of 26 members revised and edited the 2010 standards to more accurately reflect the differences between a reading/literacy specialist, a literacy coach, and a literacy coordinator/supervisor (International Literacy Association, 2018). The umbrella term specialized literacy professionals was used in the 2017 standards to encompass the three unique capacities in which a specialist, coach, or coordinator can serve (Bean & Kern, 2018). Bean and Kern (2018) explain that the Standards for the Preparation of Literacy Professionals 2017 are useful in the following ways:

They provide guidelines for universities and colleges who prepare specialized literary professionals. They can also serve as a tool for state departments developing regulations for credentialing literacy professionals or for school districts who are hiring them or developing job descriptions for them. Further, the standards can be helpful to those serving as specialized literacy professionals in schools as they highlight what these professionals need to know and be able to do to be effective in their positions (p. 615).

To truly understand the complex nature of the reading/literacy specialist position, it is necessary to examine their roles in the specific contexts in which they practice. In
preparation for this role, reading/literacy specialists in Pennsylvania are required to hold a reading specialist certificate. This certification requires an undergraduate degree in education with an initial teaching certificate that includes supervised field experiences, followed by additional course work and advanced preparation typically in a master’s degree program and practicum experience. Certification requirements in Pennsylvania have evolved throughout the last 30 years and are further explained in Table 2.1.
<table>
<thead>
<tr>
<th>Date of Revisions</th>
<th>Major Changes to Reading Specialist Certifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/2019</td>
<td>Updated grade scope for consistency and clarification</td>
</tr>
<tr>
<td>7/2017</td>
<td>Added Certificate Clarifications regarding ELA in middle level grades 7 through 9</td>
</tr>
</tbody>
</table>
| 11/2016          | • Updated language to align with the Core Academic Standards  
|                  | • Removed permission to teach English in grades 7-9  
|                  | Definitions removed |
| 7/2004           | • Definitions of developmental and diagnostic prescriptive reading were listed  
|                  | Reading specialists were permitted to teach English courses |
| 7/1987           | • Definitions of developmental and diagnostic/prescriptive reading were listed  
|                  | • Elementary K-6 certificate could be used to teach developmental reading and reading to special education students  
|                  | • Listed certificate titles that could be used to teach developmental and diagnostic/prescriptive reading to any grade level and to special education students:  
|                  | o Reading Teacher  
|                  | o English/Reading  
|                  | • Special Education certification could be used to teach developmental reading to special education students  
|                  | • Supervisor of Reading certificate or a Reading Specialist issued prior to 7/1/1988 is qualified to supervise a reading program PreK-12, but not Reading/Language Arts  
|                  | • Developmental reading that is part of a language arts course may be taught as follows:  
|                  | o Elementary grades: Elementary K-6  
|                  | o Secondary grades: English, Communication, English/Reading  
|                  | o Middle grades: CSPG #86 of 1/1987  
|                  | Reading aides: CSPG #107 of 1/1987 |
Elementary Certificates issued prior to 7/1/1969 were valid for teaching elementary subjects in K-8 (Pennsylvania Department of Education, 2014). Elementary Certifications after 1/1/1987 limited the grade level span to K-6, allowing teachers to teach specialist subject areas to students within the self-contained classroom. As of 3/1/1988, Elementary Education and Assignment Scope Elementary K-6 certified teachers were not permitted to teach remedial reading classes but could teach developmental reading at the K-12 grade level, (Pennsylvania Department of Education, 2014). As of 3/1/2014, the certificate area of Grade PK-4 replaced Elementary K-6 (CSPG 41) and Early Childhood N-3 (CSPG #39) (Pennsylvania Department of Education, 2019a).

Following the completion of a post-graduate program, reading/literacy specialists then interviewed for and sought positions within schools to serve in various capacities as a specialized literacy professional (Bean & Kern, 2018). The role of the specialized literacy professional can vary greatly. Bean and Kern (2018) distinguish the three unique roles as reading/literacy specialist, literacy coach, and literacy coordinator/supervisor.

<table>
<thead>
<tr>
<th>Table 2.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three Unique Roles of Specialized Literacy Professionals (Bean and Kern, 2018)</td>
</tr>
<tr>
<td>Role-Group</td>
</tr>
<tr>
<td>Reading/Literacy Specialist</td>
</tr>
<tr>
<td>Literacy Coach</td>
</tr>
<tr>
<td>Literacy Coordinator/Supervisor</td>
</tr>
</tbody>
</table>
The grade level span and case load for a reading/literacy specialist can vary greatly and is dependent upon the level of need, funding, and support from administration. Reading/literacy specialists serve in public, private, and charter schools. In addition to intervening directly with struggling readers, reading/literacy specialists can serve as literacy or reading coaches (Calo, Sturtevant, & Kopfman, 2015; Bean & Kern, 2018). While some literacy coaches have extremely rigid job descriptions, others are free to develop their own job descriptions with few restrictions (Calo, 2008). Serving as literacy coaches, the reading/literacy specialist provides job-embedded professional development for teachers that can include conducting large-group presentations, facilitating small teacher study groups, supporting grade level meetings, and working with individual teachers (L’Allier, Elish-Piper, & Bean, 2010).

Calo, Sturtevant, and Kopfman (2015) more closely examined the changing roles and responsibilities of the literacy coach/reading specialist in a qualitative study of 270 literacy coaches around the country. The participants completed an online 21-item survey comprised of both short answer and extended response questions about the roles, responsibilities, and trainings of coaches as literacy leaders within their schools and/or districts, as well as questions related to the participants’ views of themselves as literacy leaders, their roles and responsibilities, and professional development (p. 2).

In addition to demographic information, survey questions queried the literacy and leadership roles and responsibilities, coaches’ ongoing professional development and professional preparation, and provided opportunities for the coaches to discuss what they needed to be successful in their specific roles given the specific context of their schools/districts. The survey was sent to 1,900 randomly selected e-mail addresses from
a list of literacy coaches and reading specialists from around the United States. Of the 1,900 e-mails sent, 31% of the e-mails were opened, with an overall response rate of 14.2%. The responses were then analyzed using open coding, axial coding, and selective coding. The emerging themes included the varied roles and responsibilities of coaching, the complexity of literacy coaching in the 21st century, and effective leadership with a focus on who leaders are and how they lead (e.g., Burns, 1978; Covey 2007; Fuhrman, 2010; Fullan, 2001, 2002, 2007; Goleman, 2009; Sergiovanni, 1994). The key findings were that coaches take on a variety of literacy leadership roles, have clear visions of who they are (or are not) as literacy leaders, and have numerous leadership preparation experiences.

Because there is a difference within the unique position of reading/literacy specialists, Prezyna, Garrison, Lockte, & Gold (2017) conducted a study that examined the role of the reading/literacy specialist with a special focus on how the role was defined by the school principal. The researchers studied eight elementary schools in western New York State, six public schools and two charter schools. All schools in the sample were preK-8 schools and represented urban, suburban, and rural locations. The researchers posed questions to further investigate the role of the reading specialist from various viewpoints including principals, teachers, and reading specialists.

Data were gathered using a triangulation of questionnaires, interviews, and surveys. The 8 chosen principals and 14 reading specialists completed a questionnaire prior to the interview, and then were interviewed using a structured interview protocol. In addition, the researchers sent online surveys to 171 participants that included principals, reading/literacy specialists, and teachers. Of the total 171 participants from
the eight schools which included principals, RS, and teacher recipients, 65 percent completed the survey. Standard deviation of survey results by school were calculated to analyze the degree of agreement of role among principals, RS, and teachers in each school (Prezyna, Garrison, Lockte, & Gold, 2017).

The following themes emerged from the analyses: a) Principal leadership was essential in defining the reading/literacy specialist role; b) A clearly defined role by the principal led to greater reading/literacy specialist satisfaction and perceptions of effectiveness as well as greater teacher compliance; c) Greater teacher compliance, however, did not affect attitudes towards the reading/literacy specialists role; d) Lack of a clearly defined role led to role conflict and role ambiguity for reading/literacy specialists; e) Reading/literacy specialists, even without coaching responsibilities, all served as a resource to teachers, although no time was allocated in their schedule to do so; f) reading/literacy specialists faced challenges due to increased accountability and assessment demands affected by policy, demographics, and accountability requirements. (Prezyna, Garrison, Lockte, & Gold, 2017). Within the context of this research, the emerging theme of a clearly defined role by the principal leading to greater reading/literacy specialist satisfaction and perception of effectiveness raises some concern.

**Teacher Beliefs**

Based on the above study, one might infer that reading/literacy specialists may believe their role includes the explicit guidance and support of the most struggling readers but may not have time allocated to do so as defined by their principal. Although there are challenges faced, a reading/literacy specialist must strive to be effective rather
than just be perceived as effective. Because there are many variations of the definition of
the specific role of the reading/literacy specialists, this study will need to ensure that each
reading/literacy specialist responds to questions for clarification on their specific role and
how they feel it affects the autonomy to assist the struggling readers in the
comprehension of informational text.

While the role of the reading/literacy specialist may not explicitly include a
coaching role and be centered on explicit interventions to assist struggling readers,
various multi-tiered models have been implemented to ensure that students receive the
proper support and delivery of service. One multi-tiered model, known as Response to
Intervention (RTI), is a school-wide service delivery with the intention of addressing the
needs of academically diverse groups of students by measuring their response to
research-based instruction (Fuchs, Mock, Morgan, & Young, 2003; Graner, Faggella-
Luby, & Fritschmann, 2005). Another model, known as Multi-Tiered System of Support
(MTSS), is a comprehensive system of supports that include universal screening, data-
based decision-making, tiered services and supports, standards-aligned, culturally
responsive, and high-quality core instruction, parental engagement, district/building level
leadership, SLD (Specific Learning Disability) determination, and professional
development.

In summary, a teacher’s particular set of beliefs are “at the core of reflexive and
customary decisions of practice” (Schreiber & Moss, 2002). For example, one teacher
may believe that students learn best through repeated practice, whereas another teacher
may believe that students learn best by discovering new concepts naturally. The
decision-making process that takes place while planning and implementing a lesson are
crucial in effective teaching practices. Creating and accepting new beliefs is a challenging task that Schreiber and Moss (2002) propose can only occur when a person enters a state of “genuine doubt” (p. 26). Although the state of genuine doubt is uncomfortable, it is only when a person tries to resolve this discomfort through creating or altering their existing set of beliefs that the person can either transform or replace their existing beliefs.

Pajares (1992) distinguished the critical difference between teacher knowledge and beliefs, noting that knowledge is absent of judgment and evaluation, whereas beliefs include knowledge based on a human perception influenced by previous experiences and schema. Furthermore, Deford (1985) explains that knowledge forms a system of attitudes and beliefs with direct behaviors and perceptions. Nespor (1987) argued that belief systems, unlike knowledge systems, do not require general or group consensus regarding the validity and appropriateness of their beliefs. A belief system can be defined as a “set of conceptual representations which signify to its holder a reality of given state of affairs of sufficient validity, truth, and/or trustworthiness to warrant reliance upon it as a guide to personal thought and action” (Harvey, 1986). For example, a teacher may know the physical layout of a building very well based on many years of teaching within that building but believe that various teachers have a distinct advantage based on their location within the building. The knowledge of the building layout is objective, whereas the perception of advantages and disadvantages of specific locations within the building is a subjective belief. What is crucial to note is that a teacher’s beliefs about her own abilities to influence a student’s learning directly relates to the teacher’s efficacy. Those expectations, then, directly determine the amount of persistence and effort the teacher is
willing to demonstrate toward warranting student success, despite perceived barriers (Cantrell, Almasi, Carter, & Rintamaa, 2013, p.32).

Teachers’ beliefs guide their thoughts and actions and are resistant to change. A specific set of beliefs will shape a teacher’s habits and actions. Pajares (1992) provides further insight into the role beliefs play. One’s belief system provides context for relevancy and helps to form social systems. This system of beliefs reduces dissonance confusion. People’s beliefs shape their identity and habits, becoming their “self” (p.317-318).

Some beliefs may be shaped from the thousands of hours that preservice teachers spend as students in the K-12 classroom (Zeichner & Tabachnick, 1981). Even after formal training at the university level, this underlying set of beliefs remains a major force when teachers are placed in their own classrooms. Kennedy (1997) attributed this state of affairs in part to the beliefs that pre-service and in-service teachers bring to education. The source of those beliefs is difficult to determine since they might be a product of their upbringing, a reflection of their life experiences, or a result of socialization processes in schools. Nevertheless, pre-service and in-service teachers alike have strong beliefs about the role that education can play, the explanations for individual variation in academic performance, right and wrong in a classroom, and many other areas (Kennedy, 1997; Raths, 2001).

Furthermore, cognitive dissonance can occur when one’s system of beliefs are challenged. Dissonance theory suggests that if we engage teachers and teacher candidates in activities that arouse dissonance, beliefs might change (Festinger, 1957). Festinger (1957) explains that this dissonance occurs when “bor” collides with new
cognitions. Pajares (1992) adds, “All individuals, at some point in their lives, suffer attacks of cognitive dissonance, where incompatible beliefs are suddenly thrust on them and they must behave in a manner consistent with only one of these beliefs. It is at this point that connections are discovered or created, and the centrality of a belief comes to prominence.” For example, an established reading specialist may get a troubling evaluation regarding his or her planning and preparation from a new supervisor. The teacher believes years of experience combined with professional development and training have led to a consistent satisfactory level of planning and preparation. The teacher may be reluctant to receive feedback from a supervisor on ways to improve the planning process, as belief systems and previous experiences have led the planning and preparation a teacher has executed thus far.

**Teacher Beliefs and Teacher Self-Efficacy**

Teachers’ beliefs about their own ability to perform well can be explained by the theoretical concept of *self-efficacy*. Bandura (1999) explains that the source of self-efficacy is derived from four main sources of information: performance accomplishments, vicarious experience, verbal persuasion, and physiological states. Performance accomplishments are noted as especially influential due to the basis of personal mastery experiences. In a vicarious experience, teachers rely on inferences made from social comparison, which may result in a weaker efficacy expectation that is more vulnerable to change (p. 290). In verbal persuasion, “a person is led, through suggestion, into believing they can cope successfully with what has overwhelmed them in the past” (p.291). These expectations are also likely weaker than a performance accomplishment due to a lack of an authentic experience from which to draw. The fourth source of self-
efficacy, physiological states, generates emotional arousal and affects perceived self-efficacy in coping and threatening situations. These four main constructs are not hierarchical and can each influence both a teacher’s or student’s self-efficacy. Bandura (1999) further explains that a person’s efficacy expectations, which vary in magnitude, generality, and strength, influence a person’s behavior, which ultimately affects the outcome expectations and overall outcome (p.287).

**Collective Teacher Efficacy**

In addition to teachers’ self-efficacy, an individual teacher or group of teachers may also have collective teacher efficacy, defined as beliefs regarding the combined ability of the faculty of teachers within a given school to execute courses of action required to have a positive effect on students (Adams & Forsyth, 2006; Bandura, 1997; Goddard & Goddard, 2001; Goddard, Hoy & Woolfolk Hoy, 2004). In particular, past school successes build teachers’ belief in the capability of the faculty, whereas failures tend to undermine the belief (Goddard, 2001; Goddard, Hoy & Woolfolk Hoy, 2004). Additionally, “Collective efficacy is associated with the tasks, level of effort, persistence, shared thoughts, stress levels, and achievement of groups” (Goddard, Hoy, & Woolfolk Hoy, 2000, p. 482). There are few studies that have explored the relationship between perceived collective efficacy and individual teacher self-efficacy. Two of the notable studies are further explained.

Goddard and Goddard (2001) applied social cognitive theory (Bandura, 1986) to theoretically analyze the relationship between teacher and collective efficacy. The
authors used hierarchical linear models to empirically test the strength of the relationship between two theoretically related yet conceptually distinct constructs (Goddard & Goddard, 2001). Data were collected in the form of randomized survey distribution from 438 teachers in 47 elementary schools in a large urban school district in the mid-western United States. The authors note a distinction between efficacy perceptions and outcome expectancies. “Efficacy constructs measure a person’s belief in his/her ability to execute the actions required to succeed at a given task. Outcome expectancies, on the other hand, indicate a person’s belief that certain behaviors will lead to desired outcomes” (p. 811). An example of a question that could measure collective efficacy measure read, “Teachers in the school are able to get through to difficult students” (p. 812). The results show that collective efficacy predicts variation in teach efficacy above and beyond the variance explained by a number of school contextual factors including socioeconomic status and student achievement. The authors further discuss that organizations appear to play a role in teachers reported levels of efficacy. (Goddard & Goddard, 2001).

Hattie (2018) supports this stance in his meta-analysis of What Works in Education. Hattie noted the effect size of [teachers] working together to evaluate their impact as \( d = 1.57 \). One can assume, then, that the likelihood of teachers working together to evaluate their impact would be dependent upon the collective teacher efficacy within the building. Goddard, Hoy, and Woolfolk Hoy (2000) developed and tested an operational measure of collective teacher efficacy and was found to have strong reliability and reasonable validity. The instrument was used to examine urban elementary schools in one large midwestern district. Findings demonstrated a positive
association between collective teacher efficacy and differences between schools in student-level achievement in both mathematics and reading.

Skaalvik and Skaalvik (2007) developed the Norwegian Teacher Self-Efficacy Scale (NTSES), and examined the relationship among teacher self-efficacy, perceived collective teacher efficacy, external control (teachers’ general beliefs about limitation to what can be achieved through education), strain factors, and teacher burnout. The NTSES consisted of six sub-scales: Instruction, Adapting Education to Individual Student’s Needs, Motivating Students, Keeping Discipline, Cooperating with Colleagues and Parents, and Coping with Changes and Challenges. Participants were 244 teachers from 12 elementary and middle schools (1st-10th grade) in both rural and urban Norwegian areas. The sample included 63% women with a mean age of 45 and 14 average years in the teaching profession. The participants completed the questionnaire by answering 24 questions on a Likert-scale. One example of a statement used to address perceived collective teacher efficacy is, “Teachers at this school succeed in teaching math and language skills even to low-ability pupils” (p.625). The NTSES was analyzed first by means of Cronbach’s alpha to determine the 4 items with highest internal consistency in each dimension. The 24 resulting items were then analyzed by means of exploratory and confirmatory factor analysis. The analysis supported the conceptualization of teacher self-efficacy as a multidimensional construct. There was support for the six separate but correlated dimensions of teacher self-efficacy listed above. They also found support for a strong 2nd-order self-efficacy factor underlying the 6 dimensions. Teacher self-efficacy was conceptually distinguished from perceived collective teacher efficacy and external control. Teacher self-efficacy was strongly related to collective teacher efficacy and
teacher burnout. (Skaalvik & Skaalvik, 2007). This complex study demonstrates the relationship between teacher self-efficacy and collective teacher efficacy. The study also supports the need to further analyze teacher self-efficacy to determine if they have an impact on teaching strategies and teacher behavior.

Adams & Forsyth (2006) examined the influence of three contextual variables: socioeconomic status, school level, and school structure on teacher perceptions of collective efficacy.

School level data were collected from a cross-section of 79 schools in a Midwestern state. Data were analyzed at the school level using hierarchical multiple regression to determine the incremental variance in collective teacher efficacy beliefs attributed to contextual variables after accounting for the effect of prior academic performance. Results support the premise that contextual variables do add power to explanations of collective teacher efficacy over and above the effects of prior academic performance. Further, of the three contextual variables school structure independently accounted for the most variability in perceptions of collective teacher efficacy (p.625).
Figure 2.1. Hypothesized model of perceived collective teacher efficacy, Adams and Forsyth (2006).

Teacher Beliefs, Self-Efficacy and Literacy Instruction

In a qualitative multiple case study, Schmid (2018) examined the beliefs and behaviors of three teachers and their principals whose students scored 10% above state average consistently on the California Standards Test in English Language Arts. The following research questions were addressed: “What do teachers believe about their students’ ability to succeed? What do teachers believe enables students to succeed? What behaviors do the teachers exhibit that elicit student success? What personal beliefs do teachers profess about teaching and learning?” (p. 2). Classroom observations and interviews with the teachers and their principals revealed that “teachers believed all students could and would learn, and that student learning was a direct reflection of their teaching. They also believed that for learning to take place, teachers engaged in their own professional learning and provided appropriate instruction” (p. 1). Although the
sample size was small, the teachers’ beliefs in their students aligned with an above average student performance. The teachers in this study were relentless and tenacious in ensuring their students’ success. Based on this evidence, this common thread of teachers’ beliefs in their students remains crucial for student success in comprehending informational text.

To examine the implications of self-efficacy in the classroom with regards to teaching reading and writing, Corkett, Hatt, and Benevides (2011) compared the relationship between teacher self-efficacy, student self-efficacy, and student literacy ability. This study included 122 6th grade students and six 6th grade teachers. Of the six classrooms, the researchers included two high performing classrooms, two basic performing classrooms, and two low performing classrooms. The six teacher participants were asked to report their self-efficacy for teaching reading and writing and their perceptions of the students’ self-efficacy for reading and writing using a questionnaire. The 6th grade student participants reported their self-efficacy for reading and writing with a questionnaire posing questions related to their ability, as measured by the Woodcock Johnson Tests of Achievement - III (WJ-III). Correlational analysis was conducted using each of the questionnaires and the WJ-III. The results showed a significant correlation between a teacher’s perceptions of a student’s self-efficacy and a student’s abilities. However, there was no correlation between students’ literacy self-efficacy and their literacy ability. It is implied that there is a correlation between the teacher’s perception of a student’s self-efficacy and the student’s actual ability. This study links the need for a teacher to have self-efficacy in teaching reading and writing, as well as a student to have self-efficacy in the literacy abilities.
In another study, Guo, Connor, Yang, Roehrig, and Morrison (2012) examined the direct effects of teacher self-efficacy on fifth-grade student outcomes, as well as the indirect effects of teacher self-efficacy on student outcomes through their classroom practices. These classroom practices were grouped into three practice variables: 1) time on academic activities, represented by the total amount of observed time spent on content area instruction, 2) teacher warmth, represented by three indicators—teacher sensitivity (positive), overcontrol (negative, and detachment/disengagement (negative); and classroom environment, compromised of global ratings of positive classroom climate, productive use of instructional time, and teacher evaluative feedback (p. 6). The study used the data from Phase III of the National Institutes of Child Health and Human Development (NICHD) Study of Early Child Care and Youth Development, which followed over 1,100 of the children through their seventh year of school. Teacher measures included a Teacher Self-Efficacy Questionnaire (Bandura & Wessels, 1997) that assessed the teacher’s self-efficacy regarding management, instruction, and motivation of children, as well as teachers’ self-efficacy to create a positive school climate. Teachers’ educations and years of experience were considered, as well as their classroom practices based on a Classroom Observation System. This observation system included observations of time spent in academics and teacher warmth/classroom environment. Student literacy was measured through the use of the Woodcock-Johnson Test of Achievement-R that examined letter-word identification, vocabulary knowledge, and passage comprehension.

Each of the studies reviewed above examined the implications a teacher’s set of beliefs might hold for the achievement and success of struggling readers as they work to
comprehend a variety of text genres. In each study, perceptions of self-efficacy were shown to influence the use and instruction of metacognition, as both the teacher and student became more aware of their thoughts and actions, and ultimately came to believe in their own abilities. The teachers came to believe that they could effectively teach, and the students became more confident in their ability to process information, respectively. Goddard and Goddard (2001) states that “individuals’ perceptions of self-efficacy for various pursuits arise from cognitive and metacognitive processing of relevant information” (p. 809). If both teachers and students, then, are aware of their competence in teaching or reading, they are better able to utilize their awareness to self-regulate. That could mean teachers could design ways for students to monitor the metacognitive processes used and how to foster the use of those processes in a way which could feed their learning forward and eventually require less direction and support from other teachers, mentors, and peers.

**Self-Regulation**

According to Bandura’s social cognitive theory (1986), another key cognitive process embedded within metacognition is self-regulation. Self-regulated learning refers to “self-generated thoughts, feelings, and actions that are systematically designed to affect one’s learning of knowledge and skills” (Zimmerman, 2000). Schunk and Zimmerman (2007) conveyed a social cognitive model of the development of self-regulation that proposes four phases of development: 1. Observation; 2. Emulation; 3. Self- Controlled; and 4. Self-Regulated. In the first and second phases, the learner relies on social sources such as modeling, verbal instruction, and social guidance and feedback.
In the second two phases, the learner internalizes the skills and eventually adapts their skills and strategies to meet the needs of changing personal and contextual conditions (p. 12-13). This eventual shift to internalization aligns with Vygotsky’s (1962) sociocultural theory that socially-mediated activity is an important influence of thought and scaffolds a learner’s ability within the zone of proximal development to move to more self-regulated forms of cognition. Schunk and Zimmerman’s (2007) social cognitive model explains that internalization can be based on internal speech, visual images, verbal meanings, and nonverbalized rules and strategies which can be transferred through modeling (p.14). When struggling readers are attempting to comprehend informational text, the complex processes that take place require the readers to internalize what they are reading, and respond to the text in a variety of ways, depending on the learning objectives and goals for the lesson.

In addition to responding to the text, a reader must be able to self-regulate their learning, which is dependent on self-assessment – via self-monitoring and self-evaluation – to support student learning (Butler & Winne, 1995; Zimmerman & Moylan, 2009). This idea of self-assessment is the evaluation of your own knowledge, and is often included as one important part of self-regulation (Osterholm, 2015). The following meta-analysis explores the effects of self-assessment on students’ self-regulated learning (SRL) and self-efficacy (Panadero, Jonsson, & Botella, 2017). Within the four meta-analyses conducted, the following research questions were explored:

1) Do self-assessment interventions have an effect on students' SRL?

1a) Is there a differential effect based on different SRL instruments and constructs?
2) Do self-assessment interventions have an effect on students' self-efficacy?
3) Do the moderating variables gender, age/educational level, self-assessment intervention, and implementation agent influence the effects of self-assessment on students' SRL and/or self-efficacy? (p. 79).

The authors conducted a thorough search through the existing literature, and found 19 studies that met their search and inclusion criteria with a total sample of 2,305 students. Following a statistical analysis, the researchers found that interventions promoting self-assessment were shown to have a positive effect on students’ SRL and, to a higher extent, on students’ self-efficacy. In addition, the two specific moderating variables of gender and self-assessment components were shown to have differential effects on students’ self-efficacy. These results demonstrate the essential need for self-assessment interventions to promote students’ use of learning strategies and the effect it has on motivational variables such as self-efficacy (Panadero, Jonsson, & Botella, 2017).

**Metacognition**

Before students can fully utilize the metacognitive processes that take place before, during, and after the reading of a piece of information text, they must fully understand the idea of metacognition as it relates to reading comprehension and learning. While traditional practices in the field of reading comprehension have delved deeply into the need for strategy instruction, Harvey and Goudvis (2013) explain that “We don’t teach strategies for a strategy’s sake. We teach our kids to think strategically so they can better understand the world around them and have some control over it” (p. 433). Teaching students to think strategically can be harnessed through the power of
metacognition. This process of thinking deeply about what is being read and one’s thought process while reading is known as metacognition. Metacognitive practices increase students’ abilities to transfer or adapt their learning to new contexts and tasks (Bransford, Brown, Cocking, & National Academy of Sciences, 2000; Palincsar & Brown, 1984). The Latin root -meta refers to something higher or beyond, and cognition is defined as the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses. More plainly, metacognition is often defined as “thinking about one’s thinking.” To best understand how these phenomena occurs, the following explanation is most thorough and provides an example of how this process occurs.

Brown pushed beyond Flavell's review and studies with metanemonic development. Brown (1978) uses Flavell's 1976 definition of metacognition:

Metacognition refers to one's knowledge concerning one's own cognitive processes and products or anything related to them, e.g., the learning-relevant properties of information or data. For example, I am engaging in metacognition (metamemory, metalearning, metaattention, metalanguage, or whatever) if I notice that I am having more trouble learning A than B; if it strikes me that I should double-check C before accepting it as a fact; if it occurs to me that I had better scrutinize each and every alternative in any multiple-choice type task situation before deciding which is the best one; if I sense that I had better make a note of D because I may forget it; .. (more examples)

Metacognition refers, among other things, to the active monitoring and consequent regulation and orchestration of these processes in relation to the
cognitive objects or data on which they bear, usually in the service of some concrete goal or objective. (Flavell, 1976, p.232)

This definition and example laid the groundwork for ideas regarding metacognition. Flavell (1979) talks about a child's knowledge and cognition about cognitive phenomena, or metacognition. He split these among four classes: 1. metacognitive knowledge, where a child stores world knowledge of people as cognitive creatures with diverse goals, tasks, actions, and experiences. 2. metacognitive experiences, which are any conscious cognitive or affective experiences that accompany and pertain to any intellectual enterprise. 3. goals (or tasks) are the objectives or a cognitive enterprise. 4. actions (or strategies) are the cognitions or other behaviors employed to achieve them (Flavell, 1979). In summary, metacognitive knowledge allows a reader to determine the explicit and implicit demands of a particular task, allowing the reader to be firmly aware of the task at hand, and how exactly to accomplish that task through growth and development as a reader.

During the process of working to comprehend informational text, students must explore these classes of cognitive phenomena in order to tap into a deeper awareness of their learning experience while reading. If a teacher creates a mental model for his or her students that explicitly models this process that occurs while they are reading, students can become more self-aware of the processes that are occurring each and every time they read and respond to text. Borkowski, Chan, and Muthukrishnia (2000) stress that the centerpiece of metacognitive theory is strategy selection and use. Both strategy selection and strategy use are essential for effective learning and problem solving providing “the context for training higher-level planning and executive skills explicitly as well as
representing the basis for restructuring attributional beliefs and enhancing self-efficacy” (Borkowski, Chan, & Muthukrishnia, 2000, p. 9).

An exploratory study by Okoza, Aluede, and Owens-Sogolo (2013) examined metacognitive awareness of learning strategies among secondary school students in Edo State, Nigeria. A total of 1,200 students with an age range of 11-16 years participated. The participating students consisted of 624 males and 576 females who were drawn through multistage proportionate random sampling techniques from the entire student population of 179,496 students enrolled in secondary schools in Edo State during the 2011/2012 academic session. The researchers used a survey instrument titled ‘Assessing metacognitive awareness of learning strategies (AMALS)’ that contained a section of demographic variables and a seventeen item assessment based on the categories of planning, monitoring, and evaluating. Section B of the survey instrument gave a typical description of the students’ metacognitive awareness of learning strategies while dealing with their academic work. The students were to select a number on a five-point scale in which never represents a score of 1, sometimes a score of 2, and so on. The data were analyzed using descriptive statistics. The study found that the participating secondary school students had poor use of metacognitive awareness of learning strategies. The researchers also concluded that there was no significant difference between students in junior and senior secondary schools in the extent to which they used metacognitive awareness of learning strategies. Based on their findings, the researchers recommended that: a) teachers should teach explicitly with metacognitive learning strategies; b) both pre-service and in-service teachers should be taught the concept of metacognition as a
new strategy for enhancing students learning; and, c) direct instruction on metacognitive awareness strategies should be given to the students in the classroom.

These findings underscore that "metacognition has a critical role to play in successful learning. Students who demonstrate a wide range of metacognitive skills such as concept-mapping, self-questioning, flow chart and matrices, peer discussion and qualitative reasoning perform better on examinations and complete work more efficiently. Such students are self-regulated learners who utilize the 'right tool for their learning task' and modify learning strategies and skills based on their awareness" (Okoza, Aluede, & Owens-Sogolo, 2013).

To examine more closely how a student might engage in metacognition during a reading event, McTavish (2008) qualitatively illustrated and compared the metacognitive strategies that a grade 3 female student used while reading narrative and informational texts. The researcher used interviews, observations, and videotaping of the student’s oral reading sessions of narrative and informational text. The data were examined using thematic analysis. McTavish concluded that the student used markedly different metacognitive strategies for each genre, resulting in comprehension difficulties while reading informational text. For example, the student most frequently used “figuring out unknown words” (p. 418), or clarifying specific words within both narrative and informational texts, whereas the student used the making predictions strategy for a narrative piece of text but not when the student read informational text. The author also found that the test subject used the strategy of making inferences and drawing conclusions for monitoring comprehension slightly more when reading the informational text compared to reading narrative text. Duke (2004) recommends that students should
be taught how to activate prior knowledge, make predictions, think aloud, monitor what they read, assess their understanding, and generate questions. McTavish (2008) specifically noted the strategies the test subject failed to utilize while reading informational text.

McTavish’s (2008) study informs this investigation because the researcher specifically examined the usefulness of the metacognitive strategies employed during oral reading of informational texts. Although the study used a single participant, the researcher was able to deeply analyze the student’s conversation during spontaneous and researcher prompted metacognition. The findings brought awareness to the process that takes place while a reader is making the switch from learn to read to read to learn. In addition, the idea of stimulated recall to access a student’s metacognition enabled the researcher to gain an understanding of the student’s thinking process while reading, and gauge comprehension progress over time. The findings support research (i.e., Okoza, Aluede, & Owens-Sogolo, 2013) that indicates a need for explicit teaching of metacognitive strategies.

In summary, for students to comprehend informational text, they must be taught specific metacognitive strategies such as making predictions and generating questions while working with explicit text patterns. Flavell’s (1979) seminal research on metacognitive knowledge, experience, goals, and actions (strategies) laid a strong foundation upon which to build the idea of comprehending informational text within a struggling reader. The complex processes that occur when students are selecting and using metacognitive strategies allows readers to self-regulate learning. In order to impact comprehension, however, these strategies require explicit modeling from the teacher
and/or reading specialist in order to provide students with a greater understanding of the concept of metacognitive strategies that have the greatest potential to improve comprehension.

**Metacognitive and Cognitive Strategies Used to Comprehend**

Evidence-based strategy instruction is necessary for deep thinking and comprehension of informational text (Brown, 2008; Ciullo et. al., 2016; Harvey & Goudvis, 2013; McCown & Thomason, 2014). The various strategies, known by Palinscar & Brown (1984) as processes for enhancing comprehension and overcoming comprehension failures, have been identified in countless research studies as effective instruction for struggling readers. Specifically, for comprehending informational text, readers can use the metacognitive and cognitive strategies of Collaborative Strategic Reading (CSR) that include *Preview* (activating prior knowledge and analyzing text structure before reading), *Click and Clunk* (self-monitoring during reading), *Get the Gist* (finding the main idea during reading), and *Wrap Up* (generate questions and review after reading) (Klingner & Vaughn, 1999). While these strategies are useful, “more research needs to focus on the potential effects of CSR on metacognition, self-regulation, and self-efficacy of learners and the ways professional development can enhance their development” (McCown & Thomason, 2014, p. 250).

Similarly, Vaughn et al. (2011) conducted an experimental study to examine the effects of collaborative strategic reading (CSR) and metacognitive strategic learning on reading comprehension. Their study examined for 61 seventh- and eighth-grade English/language arts classes (27 comparison and 34 treatment) in two states, Texas and Colorado and in three school districts. The study involved 17 teachers varying from 1 to
35 years (mean = 9.5) of experience who provided English/language arts/reading instruction daily. Teachers implemented the intervention of CSR for 50 minutes a day, two days a week, for approximately 18 weeks. The findings suggested that CSR was both a feasible and effective practice that, when integrated into reading and language arts instruction, could produce a positive impact.

A specific approach to teaching comprehension strategies that is similar to CSR is known as Reciprocal Teaching (Klingner & Vaughn, 1996; Oczkus, 2010; Palinscar & Brown, 1984; Rosenshine & Meister, 1994;). The strategies included in Reciprocal Teaching are predicting, questioning, summarizing, and clarifying (Oczkus, 2010). Palinscar and Brown (1984) found that “reciprocal teaching, with an adult model guiding the student to interact with the text in more sophisticated ways, led to a significant improvement in the quality of the summaries and questions, as well as sizable gains on criterion tests of comprehension, reliable maintenance over time, generalization to classroom comprehension tests, transfer to novel tasks that tapped the trained skills of summarizing, questioning, and clarifying, and improvement in standardized comprehension scores” (p. 117).

The above two strategies of CSR and Reciprocal Teaching are instrumental in helping to gain a better understanding of how struggling readers can gain the tools necessary to comprehend. The limitations of these studies with regard to the researcher’s lens is that it is not specific to informational text. Additional research can be done to focus on the effects of implementing CSR or Reciprocal Teaching into the comprehension of informational text with struggling readers.
Collaborative Strategic Reading and Reciprocal Teaching strategies are among many working frameworks that place teaching and learning in a cycle of growth and development, with effective teaching at its center. Table 2.2 displays the research based, relevant models and frameworks implemented to further reading comprehension for struggling readers through a cognitive strategy instructional approach. The table notes the year of publication, the names of the researcher(s), the name of the model/framework, and lists the strategies included in the model/framework.
<table>
<thead>
<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Model/Framework</th>
<th>Strategies Included</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>Palinscar &amp; Brown</td>
<td>Reciprocal Teaching</td>
<td>Predict, clarify, question, summarize</td>
</tr>
<tr>
<td>1995</td>
<td>Pressley &amp; Afflerbach</td>
<td>Constructively Responsive Reader Model</td>
<td>Readers: 1) Seek overall meaning of text, actively searching, reflecting on, and responding to text is pursuit of main ideas 2) Respond to text with predictions and hypothesis that reflect their prior knowledge 3) Are passionate in their response to text 4) Predict their comprehension processing and responses to text based on prior knowledge</td>
</tr>
<tr>
<td>1996</td>
<td>Brown, Pressley, Van Meter, &amp; Schuder, Brown, Pressley, Van Meter, &amp; Schuder,</td>
<td>Transactional Strategy Instruction</td>
<td>Make connections, predict, visualize, self-question, summarize, and clarify</td>
</tr>
<tr>
<td>1999</td>
<td>Klingner &amp; Vaughn,</td>
<td>Collaborative Strategic Reading (CSR)</td>
<td>Preview, Click and Clunk, Get the Gist, Wrap up</td>
</tr>
<tr>
<td>2003</td>
<td>Almasi</td>
<td>Good Strategy User Model</td>
<td>Possess an extensive knowledge base, are motivated, make use of metacognitive factors, are able to analyze reading tasks, and possess a variety of strategies</td>
</tr>
<tr>
<td>2004</td>
<td>Guthrie, Wigfield, Barbosa, Perencevich, Taboada, Davis, Scadiffi, &amp; Tonks</td>
<td>Concept-Oriented Reading Instruction (CORI)</td>
<td>Activate background knowledge, question, search for information, summarize, organize graphically, and structure stories</td>
</tr>
<tr>
<td>2011</td>
<td>Foley</td>
<td>Comprehension Strategy Instruction</td>
<td>Activate prior knowledge with predictions, think-alouds, text structures, mental imagery, summarize, and question/clarify.</td>
</tr>
</tbody>
</table>
Table 2.2 reveals that strategy instruction has evolved throughout the past forty years from teaching reading comprehension strategies to more holistic models that recognize that many interrelated processes must work together to support the complex process of strategic reading. And, the table also depicts the variety of research-based instructional options available to teachers who are trying to increase a struggling student’s ability to comprehend text.

More recent work in strategy instruction (Guthrie et al., 2004) notes the increased impact that occurs when the teaching of cognitive strategy instruction is combined with motivation-supporting practices, as compared to cognitive strategy instruction only (p. 406). One example Guthrie et al. (2004) suggests regarding motivational strategy support is giving students the autonomous choice of selecting a given piece of text rather than assigning a specific passage, as it is known to be motivating (p. 405).

Tarchi (2017) “explored the differential contribution of cognitive and motivational factors on the comprehension of an expository text in secondary school students” (p. 154). The researcher assessed one hundred fifty-five 7th and 8th grade students in the area of prior knowledge, inferences, metacognition, reading motivation, topic interest, and reading comprehension of history text. Each of the areas were assessed using a variety of multiple-choice questions to assess prior knowledge, inferences, and metacognition. Reading motivation was assessed using the Motivation for Reading Questionnaire, which includes 53 items evaluated on a four-point Likert scale. Topic interest was assessed through a 15-item questionnaire on a five-point Likert scale. Finally, reading comprehension of history text was assessed using a 13-question multiple choice assessment that followed a history passage in which the students had not
previously discussed with their teachers. The questions varied by literal, inferential, and problem solving. The researcher hypothesized the following four points: 1) Topic interest contributed to reading comprehension independently from motivation; 2) Topic interest mediated the effect of reading motivation on reading comprehension; 3) Students’ cognitive (metacognition and inference-making skills) and motivational skills (reading motivation and topic interest) independently contributed to reading comprehension; and 4) Motivational variables play an energizing role in the relationship between cognitive variables and reading comprehension (p. 161). Multiple regression analysis revealed that inferences and self-efficacy uniquely contributed to reading comprehension. In addition, intrinsic motivation moderated the association between metacognition and reading comprehension of a history text. In summary, students who are intrinsically motivated, able to infer, and have self-efficacy may be better able to comprehend informational text.

When struggling readers lack intrinsic motivation, are unable to infer, and have low self-efficacy, educators face additional challenges in teaching comprehension. In turn, both classroom teachers and reading specialists must first learn how to be effective in their teaching. To do that, researchers Moss and Brookhart (2012; 2015) suggest that each lesson requires a quality-learning target that guides the teacher and the student as they gather evidence in order to increase student achievement. Their research is based on the idea that the most effective learners have mastered the art of self-assessment and self-regulation because it is strategically developed as an integral part of each lesson. They propose four questions that effective teachers answer from the student’s point of view to ensure that students understand, aim for, and help get themselves to a high-quality learning target:
• What will I be able to do at the end of today’s lesson?
• What do I have to learn to be able to do it?
• How will I be asked to show that I can do it?
• How well will I be expected to do it?” (p. 73).

The researchers found that when teachers plan and implement a lesson guided by these four questions, students engage in intentional and self-directed learning of the important content, skills, and reasoning processes; deepen their learning during a performance of understanding that gives them the opportunity to assess their understanding and their work as they are working and learning; and apply specific success criteria that enables them to monitor and improve the quality of their efforts. This approach not only raises achievement during the lesson but also contributes to increased motivation to learn, and higher levels of positive self-efficacy for the task at hand by helping students harness the workings of their own minds (Moss & Brookhart, 2012; 2015).

Both cognitive and developmental psychologists have distinguished two types of knowledge that strategic readers possess: declarative and procedural (Almasi, 2003). Paris, Lipson, and Wixson, (1983) bring to light the third, and possibly most crucial knowledge type that permits readers to process text strategically, known as conditional knowledge. Declarative knowledge is defined as information about the structure and goal of a task as well as one’s beliefs and perceived ability to complete the task. More simply, it is defined as “knowledge that” (Almasi, 2003). With regard to comprehension of informational text, readers might believe that they can understand the information on the page, but may not know how to think strategically in a way that will help them comprehend.
The knowing *how* to think strategically to comprehend informational text comes when a learner has procedural knowledge (Paris, Lipson, & Wixson, 1983). The actions that take place after the reader is aware of the task at hand requires this process of procedural knowledge, where a learner might plan out the strategic steps necessary to comprehend informational text. For example, a struggling reader may be working with a reading specialist on comprehending a specific piece of informational text such as a current event article about how Olympic athletes train. The teacher may prompt the student to think of the steps he or she could take to comprehend the article. The student may be able to say, “I can make predictions, clarify what I am reading, and ask questions to help me understand.” This verbal response may indicate a student’s procedural knowledge. However, when asked to apply these strategies, the student may struggle in knowing when or why to use these strategies.

The third type of knowledge, conditional knowledge, is “the ability to understand *when* and *why* to use a given strategy [to process text strategically]” (Almasi, 2003). If a reader fully has conditional knowledge of how to comprehend informational text, the reader may articulate thoughts more clearly. The student in the example above may say, “I can make predictions before I read the text, clarify what I am reading if I come across a word or phrase I don’t know, and ask questions to help me clarify when I am unsure of sections of text. Using what I know about the Olympic athletes, I think they must have to train year-round to become the best at their sport.” This reader has a firmer grasp on what certain strategies make sense to use and knows why it might make sense to clarify as needed.
While Vygotsky’s research (1978) on scaffolding learning within the ZPD is essential, teachers must learn that the scaffolding process his research promotes requires that teachers fade their support to gradually release the learner as the learner becomes more capable (Sherin et al., 2004). This process of fading means that teachers must constantly check for understanding in formative and learner-engaged ways. It is only through the process of fading within the ZPD that students can become independent thinkers and readers who utilize declarative, procedural, and conditional knowledge. In other words, by creating a ZPD for learners that includes both scaffolding and fading, they learn to become strategic readers who comprehend informational text.

The difficulty teachers and reading specialists have in developing their expertise with this complex strategic instructional process is examined and explained through Almasi’s (2003) work with graduate students. It is also explored in Duffy’s (1993) analysis of teachers’ interviews that revealed the recursive process that teachers undergo when learning to teach strategies. Duffy (1993) describes nine “points of progress” that are: 1) Confusion and rejection, 2) Teacher controls the strategies, 3) Trying it out, 4) Modeling process in to content, 5) The wall, 6) Over the hump, 7) I don’t quite get it yet, 8) Creative-inventive, and 9) Unnamed (p. 113). At first, teachers don’t quite see the need for strategy instruction to be implemented and are hesitant to shy away from a traditional basal text-book. At point 2, teachers develop an understanding of the strategies, but the students are only asked what they are learning, rather than the process of how they are learning. Teachers viewed explicit strategy instructions as “cheating” (p. 114). At point 3, teachers become more comfortable in teaching struggling reader’s strategies, but are often taught in isolation and are named along with a statement that they
are important to use. Point 4 teachers were more keenly aware of “putting students in metacognitive control of the process of being strategic” (p. 115). Following point 4, Duffy describes a pivotal “wall” teachers climb over to reach a new era of thinking beyond basal readers and see the need to implement strategy instruction into their daily lessons. At point 5, teachers develop a deeper understanding of the fluid process of adapting a strategic approach to reading and relate learning goals to student interests. Point 7 teachers, although more advanced in their understanding of strategy instruction, are still searching for a specific way to “do” strategy instruction. Point 8 teachers authentically intermingled strategy instruction in a meaningful way for students with confidence and eagerness. Point 9 is unnamed because this is the point where teachers continue to refine the craft of reading strategy instruction. (p.117). These nine points are essential to note, as it provides insight into the many points of progress teachers experience while transitioning from novice to expert teachers of strategic reading.

Almasi (2003) furthered Duffy’s research by examining the growth of her 19 graduate students through careful analysis of each student’s portfolio of lesson plans and reflections. Almasi notes 20 of the most common difficulties and frustrations her graduate students experienced. Of these 20 identified difficulties, the five most common problem areas include the following: 1) Explicit instruction, 2) Reducing processing demands, 3) Unfocused lessons, 4) Planning coherent lessons, and 5) Distinguishing between skills, strategies, and activities. (p. 219). For example, an objective in a ninth grade grammar class could be to learn and use new vocabulary words. The classroom teacher plans to introduce one new vocabulary word each day and asks the students to copy the word from the board, conduct a search the word on their school-issued
computer, and then use the word in a sentence. There is little modeling and guided practice by the classroom teacher to complete this task. This requires the student to use his or her declarative and procedural knowledge to first bring their notebook, pencil, and charged computer to class. The student must then know how copy the word from the board, and search for the word, copying the definition into their notebook. Lastly, the student must use their conditional knowledge to use the vocabulary word in a sentence. This task requires a great deal of declarative, procedural, and conditional knowledge to execute.

The example above demonstrates a lack of explicit instruction, as the classroom teacher does not explicitly walk the students through what they are asked to do and relies on the assumption that the students should take the responsibility and initiative to complete this task. There are many processing demands, as the teacher relies on the student properly looking up and writing down the definition, and the alternative to coming unprepared is to sit and wait for others to finish. Some ways to reduce processing demands for this lesson would be to include a graphic organizer with a concrete example that could be completed daily and left in a class folder. The teacher could also have the definition ready on the board rather than requiring the students to look up the word, as this often leads to a student’s distraction from things on their computer like e-mail and games. There may be a focus to this lesson, but the students are often unaware due to a lack of explicit instruction. Additionally, there are many connections that could be made to the day’s lesson that are left unnamed. For example, if the class is learning about identifying and using descriptive adjectives, the teacher could
reference the day’s vocabulary word and ask the students if the word could be used as an adjective.

Reading Specialists and teachers alike must also consider the level of cognitive rigor when developing complexity in the planning and preparation of lessons. Two widely accepting models for describing rigor include Bloom’s Taxonomy of Educational Objectives and Webb’s Depth-of-Knowledge (DOK) model (Hess, Jones, Carlock, & Walkup, 2009). The cognitive rigor (CR) matrix and curricular examples help to provide a comprehensive structure for defining rigor by including cognitive processes and knowledge. Although reading specialists may identify similar problems a struggling reader is facing, the objectives may meet varying levels of cognitive rigor (Hess, Jones, Carlock, & Walkup, 2009).

To plan a more focused and coherent lesson, teachers must have a clear learning target that aligns with a performance of understanding, or a “learning experience that embodies the learning target” (Moss, Brookhart, & Long, 2011, p. 68). For example, if the learning target is: *I can summarize a non-fiction passage by including the main ideas and supporting details of the text*, the performance of understanding should include an oral or written summary of the text with main ideas and details from the piece of informational text. Struggling readers may need scaffolds such as teacher mental modeling in how to decide if a point from the text is a main idea or supporting detail. This is also known has getting the gist (Goldman & Rakestraw, 2000; Klingner & Vaughn, 1999). Within this example, the student is working on the strategy of summarizing through a clear learning target and achievable performance of understanding. Because each unique genre of text involves a different skill set, the next
section of the literature review will further define and explain informational text within
the context of the study.

**Informational text**

Struggling readers often have trouble comprehending informational text; text that is
designed to inform the reader. This type of text is also referred to as non-narrative,
expository, non-aesthetic, and non-fictional in the literature. Duke (2000) defines
informational text as “text written with the primary purpose of conveying information
about the natural and social world and having particular text features to accomplish this
purpose” (p. 205). Similarly, Goldman and Rakestraw (2000) operationalize
informational text as text that “introduces, defines, and describes a large number of
important terms that students must understand to find the gist of the passage.” And,
Rosenblatt (1994) calls this type of reading as “efferent” reading, and notes that “the
primary concern of the reader is with what he will carry away from the reading” (p, 24).

The effort required to read and understand the unique text features of
informational text can seem daunting to a struggling reader. One factor that contributes to
this problem is the lack of exposure to informational text in the early elementary grades.
A study (Duke, 2000) was conducted to address the depth of knowledge about students’
experiences with informational text in the early grades. The study included 20 teachers’
1st grade classrooms in 10 school districts in the greater Boston metropolitan area with 6
districts categorized as having a high socio-economic status (SES) and 4 districts falling
in the lowest SES category. Teachers involved in the study averaged 18.2 years of
experience. The amount of informational text available to first grade students within
their elementary classroom environment supported the studies hypothesis regarding its
scarcity. In fact, the research found that on average, informational text constituted less than 10 percent of classroom libraries. And, informational text represented an average of less than 3 percent of the materials displayed on these classrooms' walls and other surfaces. This lack of exposure to informational text at an early age contributes to a variety of educational challenges.

Recently, content area teachers have been required, through the Common Core State Standards Initiative, to share the responsibility of literacy instruction with their students (Common Core State Standards Initiative, 2012). The CCSS recommend that students in grades K-5 spend 50% of their time reading informational texts. By eighth grade that recommendation changes to 45% literacy texts and 55% informational texts, and by 12th grade it is recommended that students spend 70% of their school day reading informational texts (Moss & Loh-Hagan, 2016). Without exposure to informational text at an early age, teachers may have unrealistic expectations regarding their students’ preparation to comprehend this specific text structure because these comprehension skills and strategies may not have been explicitly modeled.

One way that elementary and middle school learners become exposed to informational text is through reading in the content areas. Within the content area curriculum and instruction, students gradually make the shift from learning to read to reading to learn. And while reading comprehension is not typically explicitly taught in the content areas, Moss (2005) suggests that it is possible to integrate instruction in learning to read with expository text comprehension instruction. That is because when teachers use authentic literature, students learn content area material more efficiently and effectively (Ciercierski & Bintz, 2015). This need for the explicit teaching of authentic
literature in the elementary grades will allow for greater comprehension of informational text.

Although classroom and remedial reading teachers may attack the delivery of comprehension instruction differently, there are several research-based efforts to clearly define strategic teaching of comprehension in informational text. Readers do not simply absorb text, but bring their “cognitive abilities, motivation, knowledge, and experiences to the process of comprehension” (McCown & Thomason, 2014). The following study McCown and Thomason (2014) …examined the effects of Collaborative Strategic Reading (CSR) on informational text comprehension and metacognitive awareness of fifth grade students. Participating students included a heterogeneous mix of regular education students, gifted education students, students with disabilities, and English learners (ELs). A quasi- experimental pretest-posttest nonequivalent control group design was used to study the effects of CSR on informational text comprehension using the Qualitative Reading Inventory-5 (QRI-5) and Georgia's Criterion-Referenced Competency Test (CRCT). Metacognitive awareness was measured using the Metacognitive Awareness of Reading Strategies Inventory (MARSI). Data were analyzed using multivariate analysis of covariance (MANCOVA) and multivariate analysis of variance (MANOVA). The MANCOVA analysis found a statistically significant difference in informational text comprehension on the QRI- 5 between the experimental and control groups with the experimental group outperforming the control group, while controlling for student reading level and student subgroup; however, there was no statistically significant difference on the CRCT or on CRCT reading
domains. The MANOVA analysis found no significant difference between the experimental and control groups on the MARSI and MARSI subscales. (p. 237)

In order for students to comprehend informational text, reading instruction must be scaffolded by habits of mind that can be identified and taught through cognitive modeling. Maloch and Bomer (2013) shed light on the trouble that varying and unclear definitions of informational text can cause educators and policy makers. The following compilation of definitions and terms used can aide in clarifying this term.

<table>
<thead>
<tr>
<th>Researcher(s)</th>
<th>Year</th>
<th>Term used</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goldman &amp; Rakestraw</td>
<td>2000</td>
<td>Informational Text</td>
<td>Introduces, defines, and describes a large number of important terms that students must understand to find the gist of the passage</td>
</tr>
<tr>
<td>Duke</td>
<td>2000</td>
<td>Informational Text</td>
<td>Texts written with the primary purpose of conveying information about the natural and social world (typically from someone presumed to be more knowledgeable on the subject to someone presumed to be less so) and having particular text features to accomplish this purpose (p. 205)</td>
</tr>
<tr>
<td>Rosenblatt</td>
<td>1994</td>
<td>Non-aesthetic/Efferent</td>
<td>The primary concern of the reader is with what he will carry away from the reading. Derived from the Lain, “efferre”, “to carry away”.</td>
</tr>
<tr>
<td>McCown and Thomason</td>
<td>2014</td>
<td>Non-Fictional or Non-Narrative/ Informational Text</td>
<td>McCown also uses Duke’s definition of Informational text, and Jitendra et al. argues the primary purpose of informational text is to convey information thus making it less engaging for a read (as cited in McCown, 2014, p.248).</td>
</tr>
</tbody>
</table>
For the purpose of this study, the term informational text will be operationalized as “text written with the primary purpose of conveying information about the natural and social world (typically from someone presumed to be more knowledgeable on the subject to someone presumed to be less so) and having particular text features to accomplish this purpose” (Duke, 2000, p. 205). In order for students to comprehend informational text, reading instruction must be scaffolded by teachers in order to promote habits of mind that can be identified and taught through cognitive modeling. Manzo (2009) defines cognitive modeling as “the thinking aloud to demonstrate a particular thinking strategy” (p. 42).

The complex and reciprocal processes of teaching and learning how to read informational text can be multi-faceted for both the teacher and the student and difficult for struggling readers. As a K-12 remedial reading specialist for the past four years, I have worked with students with a wide variety of ability levels who have needed intervention. One essential question that I routinely ask all readers, regardless of age or ability level, is: What do good readers do when they read? Their answers would be as elementary as “They sound out words they don’t know” to “They paint a picture in their mind of what the author was saying”. This question is often at forefront of most teachers of comprehension who are trying to help their students understand and navigate complex nature the reading process. It is not surprising then that researchers have tried to define the characteristics of good readers. “Good readers set goals prior to and during reading and check to see if they are meeting those goals”; “Good readers often preview a text and examine its structure before reading”; “Good readers use their prior knowledge to link ideas together and to make inferences”; “Good readers raise questions before and
while they are reading”; “Good readers make predictions and confirm them as they read”; “Good readers, at times, visualize what they read”; “Good readers are metacognitive; they identify confusions caused by unknown words or perplexing chunks of texts and work hard to resolve them”; “Good readers are thoughtful and emotive evaluators”; and “Good readers are motivated” (Duke, Pearson, Strachan, & Billman, 2011; Pressley & Afflerbach, 1995 as cited in Brown & Dewitz, 2013, p. 7-8).

Clearly, a carefully designed plan and implementation of instruction would allow teachers to effectively prepare readers to break down barriers that keep them from their goal of comprehending informational text. Vacca and Vacca (2008) explain the need for explicit strategy instruction that allows students to think more deeply about their learning and the process that occurs while they are reading. This explicit instruction includes “assessing students’ knowledge of and use of strategies, modeling and demonstrating how to use a strategy, providing guided practice, and application in the use of strategies” (p. 63).

Within content areas such as science and social studies, nearly 100% of what students are reading can be described as informational text. Content area reading, also known as content area literacy, not only requires students to become keenly aware of their metacognitive processing of content being read, but also requires that they are able to comprehend, analyze, and write about the content. Reading informational text in the content areas also asks students to rely heavily on the text for analysis. The PA Core Standards in English Language Arts (ELA) have used text dependent analysis as a way to increase the rigor and understanding expected of PA student.
Teacher Beliefs Regarding the Teaching of Informational Text

The beliefs teachers hold regarding the teaching of informational text may have an impact on their own educational practice. Richardson, Anders, Tidwell, and Lloyd (1991) conducted a study to determine the relationship between teachers’ beliefs about the teaching of reading comprehension and their classroom practices. Although the research has ebbed and flowed with current reading and literacy trends, the basis of the study remains relevant. Thirty-nine teachers from six elementary schools in two southwestern school districts participated in the study. The teachers taught in grades 4-6 with a range of experience from 1 to 32 years. Researchers used both observed classroom practices as well as the beliefs interview technique borrowed from anthropology.

The study specifically focuses on the teaching practices that would help to differentiate between the skills/word and the cognitively oriented theoretical orientations. First, the researchers sought to determine if the teachers used basal readers in the teaching of comprehension, and if so, whether they were used flexibly or inflexibly. Second, it was questioned whether the teachers asked students to read orally or silently. If oral reading was practiced, whether the teachers interrupted the students if they made an error in pronunciation. Third, it was questioned whether students’ background knowledge was considered. Fourth, the researchers questioned whether vocabulary was taught in or out of context (p. 563).

Although research has been done since then to determine the effectiveness of vocabulary instruction, background knowledge, basal readers, and oral/silent reading, the
study demonstrates that the beliefs of teachers in this sample relate to their classroom practices in the teaching of reading comprehension.

There are two areas of the literature that were lacking in empirical sources. First, review of the research turned up little specific examinations regarding the specific beliefs reading specialists specific hold regarding metacognitive processing as a way to assist struggling readers in the context of informational text comprehension. The literature addressed this by employing the literature on teacher beliefs, since reading specialists are first and foremost, classroom teachers by early preparation. Second, it was difficult to find research investigations regarding the most effective ways to teach struggling readers how to read informational text. Therefore, this study bases some of its methods on the theoretical literature regarding how readers best comprehend informational text.

The examination of the literature supports several conclusions regarding reading/literacy specialists, teacher beliefs, metacognitive processes and strategies, and informational text. First, there is evidence to support the claim that teacher beliefs are deeply engrained, hard to change, and based on personal experiences (Pajares, 1992). Since reading specialists are teachers, it is safe to assume that they have beliefs regarding how to best teach the comprehension of informational text based on their own personal experiences, rather than research evidence, and that these strong beliefs will be very resistant to change. It would also be safe to conclude that there may be differences among the beliefs reading specialists hold based on where they have the most experience regarding grade level within the K-12 grade system of organization and the extent of their professional learning and schooling.
Because teachers’ individual beliefs influence an educator’s personal practices (Deford, 1985), it becomes important to explore the beliefs individual reading specialists have regarding the development of metacognitive readers who monitor and foster metacognitive processes to become strategic readers that comprehend informational text. The following chapter will outline the methods and specific questions that must be explored to address the research question.
Chapter 3

Methodology

Introduction

The methods used in this study were designed to address the following research question: *What are the beliefs reading/literacy specialists hold regarding processes that assist struggling readers with the comprehension of informational text?*

To address the question, the study explored the beliefs that reading/literacy specialists hold in this specific context. The role of the reading/literacy specialist has evolved throughout the years (Prezyna, Garrison, Lockte, & Gold, 2017). So too has the research regarding the various metacognitive processes that must be in place for a struggling reader to comprehend a given piece of informational text. For example, a meta-analysis that explored the effects of self-assessment on students’ self-regulated learning (SRL) and self-efficacy (Pandaero, Jonsson, & Botella, 2017) highlighted the essential need for metacognitive processes such as self-assessment interventions to promote students’ use of learning strategies. The study also noted the effect metacognitive processes have on motivational variables such as students’ perceptions of positive self-efficacy. While these essential processes are strongly supported by research, their prevalence in the reading interventions employed with struggling readers is dependent upon the beliefs of the reading specialists and reading teachers who shape classroom intervention practices (Richardson, Anders, Tidwell, & Lloyd, 1991).

As reading/literacy specialists intervene in ways that help students to become more confident in their ability to learn through the reading process, the students may become better able to utilize increased self-assessment to self-regulate. This in turn would promote the development of self-aware readers who can monitor and improve their
thinking to better comprehend informational text (Butler & Winne, 1995; Corkett, Hatt, & Benevides, 2001; Guo, Connor, Yang, Roehrig, & Morrison, 2012; Zimmerman & Moylan, 2009). In addition to increasing student self-awareness, the research notes that teachers can use evidence-based strategy instruction to foster in student’s deep thinking and increased comprehension of informational text (Brown, 2008; Ciullo et. al., 2016; Harvey & Goudvis, 2013; McCown & Thomason, 2014). The evolution of reading strategy instruction and the variety of research based instructional options available to teachers who are working to increase struggling readers’ ability to comprehend informational text is organized within the literature review of this student (see Table 2.2).

**Methodology**

The study examined the belief systems of reading/literacy specialists with a focus on metacognitive processes. In addition, the study explored the foundational knowledge the specialists used to choose strategies and processes based on the needs of a struggling reader confronted with a piece of informational text. The foundational knowledge included, but was not limited to, the processes of self-regulation, self-assessment, and self-efficacy. In addition, the study examined the strategies that individual reading/literacy specialists would plan to teach a student who struggles to comprehend informational text.

Both qualitative and quantitative methods were employed to analyze the data. For the quantitative data from the questions using a Likert-Scale, frequency counts were used to collect, report, and interpret information from each question. For the open-ended prompts, the general interpretive process of close reading was used to analyze the responses from the reading specialists. The close reading process involves identifying
patterns of thinking and acting in order to discover regularities and uncover anomalies (Miles, Huberman, & Saldaña, 2014). Due to the nature of the text, this involved the thematic coding of categories that were analyzable through writing propositions about meaning. The researcher repeated the coding of several passes through the data to test the trustworthiness of information. The emerging themes (Gibbs, 2007) culled through constant comparative analysis were used to examine the similarities and differences contained in the responses to produce a comprehensive account of the findings.

**Procedures**

This mixed methods study utilized both qualitative and quantitative data to examine the existing beliefs of reading/literacy specialists. An invitation to participate in the study was distributed via e-mail to educators serving in the role of reading/literacy specialist within a county located in Southwestern Pennsylvania who had been part of the *Reading Specialist Network Role-Alike Group*. Participants were given the option to opt out of the study using the following language in the recruitment e-mail, “As stated in the informed consent statement that is located at the beginning of the response form located on SurveyMonkey, you are under no obligation to participate in this study and are free to withdraw consent to participate. You may refuse to participate or refuse to complete and share your response at any time prior to submitting your completed response form” (Appendix C).

Participants were asked to complete the response form on or before May 9, 2019 and given a two-week window to complete their responses. Because identifiers did not connect responses to participants to maintain confidentiality, two reminder e-mails were sent to all possible participants on May 15, 2019 and again on May 22, 2019. After the
two-week period, the researcher analyzed the results from the response form, applying both qualitative and quantitative analyses.

**Selection and Recruitment of Participants**

In the 2017-2018 school year, an intermediate unit in Southwestern Pennsylvania organized a networking and development opportunity called the *Reading Specialist Network Role-Alike Group (RSNRG)* for reading/literacy specialists and those in similar roles within the county in which the intermediate unit operates. Established in 1971 by the Pennsylvania General Assembly, intermediate units operate as regional educational service agencies providing cost-effective, management-efficient programs to Pennsylvania’s 501 public school districts and over 2,400 non-public and private schools. What’s more, intermediate units operate as liaison agents between the school districts and the Pennsylvania Department of Education (PaTTAN, 2018).

The RSNRG was formed in the 2017-2018 school year because reading/literacy specialists/coaches were not afforded regular opportunities to problem solve, and discuss effective strategies, and share expertise with those in similar roles. The professional networking sessions were designed to foster purposeful professional development and professional learning communities within the group tailed to specific interests and needs. The sessions were advertised via the intermediate unit’s website and shared with educational leaders across the county. The RSNRG sessions were well-received, but the available slots for the sessions were limited, resulting in a waiting list of specialists from public, private, and charter school settings who desired to participate. As a result, expanded quarterly sessions continued with both new and veteran group members during the 2018-2019 school year.
As a reading specialist within the intermediate unit in which the RSRG resides, the researcher attended one of the quarterly sessions during the 2017-2018 school year, and all four sessions in the 2018-2019 school year. The sessions specifically included training and discussion on phonics and phonemic awareness, comprehension. The sessions also provided time to network and share out ideas, and professional insights from a nationally known expert who discussed the role of the reading specialist and literacy coach. This instructional session provided valuable information regarding the current roles and capacities in which reading specialists served.

The participants for the study were selected from the RSNRG, that includes reading specialists, literacy coaches, and a few other educators serving in similar roles with varying titles and responsibilities. In the 2017-2018 school year, there were 38 registered members for the group meetings. In 2018-2019 school year, that number increased to 46 registered group members. Those 46 members included 16 educators who joined the group during the 2017-2018 school year. Twenty-two of the original members chose to leave the group or were only permitted by their district to attend one year of sessions. Thirty new educators joined the group in 2018-2019 resulting in that year’s registered membership of 46. Considering those educators who belonged to the group both years, those who left after one year, and those who joined in the second year, there have been a total of 68 reading specialists who attended some or all of the quarterly meetings over the two years of the group’s existence.

**Instruments**

An online response form was used to gather data from the specialists within the RSNRG. The response form was organized to collect posed short-answers to open-ended
prompts as well as selected responses to questions organized with a Likert-scale format (Appendix A).

The response form was distributed through the coordinator of the RSNRG (Appendix B) via e-mail and Eventbrite (Appendix C). The participants were provided a link to the response form housed on the Survey Monkey platform. The IP addresses and e-mails of the participants were not collected to ensure anonymity. An informed consent description (Appendix D) was included and preceded the data collection response form. A follow-up reminder e-mail was sent on May 15, 2019 and May 22, 2019 to ensure that all participants were reminded of the opportunity.

Of the 68 possible participants, 27 of the invitees answered some questions on the response form. Eight invitees completed the demographic portion of the form only, and therefore were removed from the results. Of the 27 invitees who completed sections of the response form, only 19 of the invitees completed both sections of the response form and therefore served as the participant group in the study (n = 19). The sections included were demographic information (part one) and open-ended responses to the questions following the vignette (part two). The vignette consisted of a short piece of informational text accompanied by a fictitious student’s attempt at summarizing the piece of text.

**Part One: Demographic Information**

In part one, the participants were asked to provide the following demographic information: a) Job title; b) Current grade levels taught; c) Number of years reading specialist certificate held; d) Number of years reading specialist position held; e) Degrees/certifications earned; f) Current school setting (public, private, charter, or other); g) Estimated percentage of time working with students, teachers, administrators, parents,
or other; h) Personal favorite genre of reading. The general information was sought to learn both the context and variety of the previous experiences and professional settings of the participants. Questions contained in section one are described below along with their connection to the study.

Question 1: Job titles are important to understanding the participants in the study. For those with reading specialist certifications titles can vary depending on the roles and responsibilities within each school setting. The titles can include but are not limited to invention specialist, instructional coach, and a combination of both coaching and teaching.

Question 2: Current Grade Level(s) taught was included to learn the grade levels in which the participants gathered professional experiences both as teachers and reading specialists. This is particularly important since the second section of the response form included a passage of informational text written on a 7th grade reading level accompanied by fictitious student work from a 7th grade struggling reader. Teachers with experience working with middle school students might have an advantage over those with no 7th grade experience in their ability to analyze the student’s work and draw conclusions regarding the student’s current challenges and needs.

Questions 3, 4, and 5 asked the participant to identify the number of years the individual has held a reading specialist certification, a reading specialist position, and a professional teaching position. The number of years each individual served as a teacher, practiced in the reading specialist role, and the length of time the person held the specialist certification provides important professional context for responses to the open-ended questions in the second half of the response form.
Question six asked the participants to identify certifications and degrees they hold. The aim was to learn more about the professional and educational backgrounds of the participants. Furthermore, the participants were asked to provide the year they obtained their degree or certification. This information was collected to provide further context. Because reading research has shifted its focus and conclusions regarding effective practice through the years, this information identified the time period during which each individual’s foundational knowledge was first formed. This is important since the research tells us the teacher beliefs are based on experience and are highly resistant to change.

Question seven asked the participants to provide information about their current school setting. This was asked because charter, public, and private schools may utilize their reading specialists differently. This experience may also shape the existing beliefs held by individual participants and may influence their approach to the vignette in the second section of the response form.

Question eight asked participants to identify the percentage of time spent with students, teachers, parents, administrators, and other stakeholders in the school setting. This was asked to prevent possible assumptions that coaches spend the majority of their time with teachers and interventionists spend the majority of their time with students. The participants could choose any percentage of time for each of the given groups, which resulted in some participants totaling more than 100% of their time.

Finally, question nine asked the participants to identify their favorite reading genre. Although personal reading preferences may have little effect on responses to the vignette, this question was posed to provide further context. For example, many reading
specialists may prefer to teach and work with fictional text. Responses to this question inform the teacher’s preference and identify which participants do not hold informational as their teaching preference.

**Part Two: Responses to the Vignette**

In section two, participants were given the following directions: “Please respond to the questions that follow about a student who is struggling to comprehend the piece of informational text below. The 7th grade struggling reader was asked to summarize the non-fiction passage. Read the passage, and then analyze the student’s responses.” The directions were constructed to provide enough information without suggesting an approach to take.

Following the directions, the participants viewed a vignette that consisted of a piece of informational text accompanied by the struggling student’s verbatim summary of the passage. The content of the vignette originated from a local webpage, authored by Jayson Kowinsky, and adapted by Bernadette Nemeth. Mr. Kowinsky granted permission for the researcher to adapt the informational passage about the massive prehistoric shark known as the Megalodon to create a short piece of informational text at a 7th grade readability level (Appendix E) on the same topic.

To determine the readability of the passage, the researcher used the Gunning Fog Index (Gunning, 1968) on the first 100 words and the last 100 words. Both pieces fell into a 7.6 readability index. An additional 100-word sample, which began with the third paragraph, was also calculated. This section has a readability of 7.2. Calculating the readability level was necessary to provide an appropriate piece of text that a 7th grade student might be asked to read and summarize.
Following the adapted piece of informational text, Bernadette Nemeth crafted a short student summary of the text to complete the vignette. The created summary stemmed from five actual student samples. There students were asked to summarize what they had read in the informational text about the Megalodon, created by the researcher. The fictitious student summary of the text included various error patterns and plausible distractors, such as spelling, incorrect facts, and errors in conventions and mechanics. The pseudo student summary read, “Plot: The plot is telling details and history at the megalodon a non extinct shark. It has 7 in. teeth. People think it was 100 feet but it was 33 ft. average. Bigger than T-Rex! Ate whales and was an underwater creacher. Elephants would bite it in half!” (Appendix A).

Following the vignette the included the informational text and the accompanying student summary of the text, the participants were asked the following five short-answer questions designed to highlight their self-selected approach to teaching this struggling reader how to better approach informational text to aid comprehension (see Appendix A): a) What problems/challenges are the student having?; b) What evidence would you use to support this decision?; c) What would be your approach to helping this student comprehend this piece of informational text and why?; d) How confident are you that this approach will be effective in helping this reader better approach and comprehend informational text? Provide your reasoning to support your level of confidence; and, e) If you are unclear of the approach to take, whom might you consult? Give your reasoning for consulting this person or persons.

The participants were first asked to identify student problems or challenges to gather the initial beliefs that reading specialists hold. Participants were additionally asked
to provide evidence to support their conclusions to learn what evidence was used within the student summary to make their initial claim(s). After the participants identified the problem with evidence to support their conclusions, they were asked to explain the approach they would take in helping this student comprehend a piece of information text and why they would take this approach. This question was posed to further address the research question.

Finally, the participants were asked how confident they were that their approach would be effective, and who they would consult if they were unsure of an approach to take. These final questions were designed to address each participant’s self-efficacy and shed light on perceptions of collective teacher efficacy within the group. It is important to note that in the design of the questions in the vignette portion of the response form, the researcher intentionally excluded words that might bias or influence participant responses. Words that were excluded from the response form were: metacognition, strategies, processes, or specific interventions. The word approach was broadly used to encourage participants to explain a wide variety of interventions and allow full autonomy in their decision-making process.
Chapter 4
Findings

Overview

The study examined the perceptions of 19 reading specialists regarding the most effective way to help a struggling reader deal with informational text in order to address the following research question: *What are the beliefs reading/literacy specialists hold regarding processes that assist struggling readers with the comprehension of informational text?* The participants were recruited from the RSNRG from an intermediate unit in Southwestern Pennsylvania who met quarterly to gain professional knowledge and share experiences and insights.

Participants were asked to provide both demographic information regarding their professional history, certifications held, and number of years working in the capacity of a reading specialist. Then, participants were asked to analyze a vignette that demonstrated the struggles of a 7th grade reader who was asked to summarize a piece of informational text.

This chapter describes the principal findings that resulted from the analyses of the participants’ responses. The findings are organized to align with the two-section design of the response form. First findings from demographic information are presented followed by the findings that resulted from the analyses of the participants’ responses to the vignette. It is important to note that the open-ended responses to the questions in the second section—the vignette—varied in length and sophistication. Regardless of where a particular open-ended response fell along that continuum, the researcher employed the
general interpretive process of close reading allowed the researcher to identifying patterns of thinking (Miles, Huberman, & Saldaña, 2014).

**Part One: Demographic Data Analysis**

<table>
<thead>
<tr>
<th>Job Title</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Specialist</td>
<td>17</td>
</tr>
<tr>
<td>Literacy Coach</td>
<td>1</td>
</tr>
<tr>
<td>Other – Classroom Teacher</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>19</strong></td>
</tr>
</tbody>
</table>

Table 4.1 displays the frequency counts of question 1: What is your job title? The majority participants indicated they were reading specialists (n=17), with the remaining two participants identifying as a literacy coach (n=1) and a classroom teacher (n=1). The classroom teacher was formerly a reading specialist and attending the RSRG. These job title outliers were identified as the literacy coach (Participant 3) and the classroom teacher (Participant 14).
Figure 4.1 displays the frequency counts of the second question on the response form: What grade levels do you currently teach? Check all that apply. Critical to this question is the context that the certification for a reading specialist in Pennsylvania is all inclusive and allows the specialist to work with students from all grades K-12.

The data show that the participants in the group worked primarily with K-6 grade levels (n=16), with only one participant working with students in the high school grades (9-12). The majority of the participants worked with students in grades K-3 (n=15). The response form included a passage and student summary on a 7th grade level. As noted in Figure 4.1, a small group of participants (n = 4) were currently teaching 7th grade students.
Question 3: How many years have you held your reading specialist degree? (Table 4.2). The largest group of participants fell in the 6-10 year range (n=7). The second largest group (n = 6) held the degree between 11 and 20 years of their career. The outliers included one participant who held the degree for more than 30 years (n=1), and one held participant who held the degree less than five years (n=1).

Table 4.3

Frequency Count of Question 4: How many years have you held a reading specialist position?

<table>
<thead>
<tr>
<th>Range of Years</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>5</td>
</tr>
<tr>
<td>6-10</td>
<td>7</td>
</tr>
<tr>
<td>11-20</td>
<td>5</td>
</tr>
<tr>
<td>21-29</td>
<td>2</td>
</tr>
</tbody>
</table>
Question 4: How many years have you held a reading specialist position? (Table 4.3). Seven participants have been a reading specialist for 6-10 years. Five participants have been a reading specialist for 1-5 years. Five participants have been a reading specialist for 11-20 years. Two participants have been a reading specialist from 21-29 years. The participants responded within a wide range of years which may infer that the professional development regarding how to best help readers use metacognitive processes may vary. In the early days of Title 1 programs, reading specialists would utilize “skill-and-drill” methods, and many specialists who received their certification during that time period might be prone to falling back on worksheets or specialized programs that emphasized skill instruction rather than pursuing metacognition (Bean, 2015).

Table 4.4

<table>
<thead>
<tr>
<th>Range of Years</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>30+</td>
<td>0</td>
</tr>
<tr>
<td>Total Participants</td>
<td>19</td>
</tr>
</tbody>
</table>

Frequency Count of Question 5: How many years have you held a professional teaching position?

<table>
<thead>
<tr>
<th>Range of Years</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>0</td>
</tr>
<tr>
<td>6-10</td>
<td>2</td>
</tr>
<tr>
<td>11-20</td>
<td>9</td>
</tr>
<tr>
<td>21-29</td>
<td>5</td>
</tr>
<tr>
<td>30+</td>
<td>3</td>
</tr>
<tr>
<td>Total Participants</td>
<td>19</td>
</tr>
</tbody>
</table>
Question 5: How many years have you held a professional teaching position? (Table 4.4). All participants (n=19) have held a professional teaching position for six or more years. Typically, reading specialists are first classroom teachers or work in the education field in some capacity before specializing in reading. In the state of Pennsylvania, Act 48 of 1999 requires persons holding Pennsylvania professional educator certification to complete continuing education requirements every five years in order to maintain their certificates in active status (Pennsylvania Department of Education, 2016). Specifically, it requires educators to earn six credits of collegiate student or six credits of Pennsylvania Department of Education (PDE) approved continuing professional education courses; or 180 hours of continuing profession education programs, activities, or learning experiences through a PDE approved provider (Pennsylvania Department of Education, 2016). This requirement often leads teachers to pursue a master’s degree or additional certification to both satisfy the requirement and further their professional learning. The changes in reading specialist certifications are further explained in Table 2.1.
Figure 4.2. Frequency Count of Question 6: Which certifications have you earned or are currently working toward?

Question six: Which certifications have you earned or are currently working toward? (Figure 4.2). The response form did not include questioning for the grade level span of the participant’s existing certification, which has changed in recent years. The highlighted changes relative to this study are included. Elementary Certificates issued prior to 7/1/1969 were valid for teaching elementary subjects in K-8 (Pennsylvania Department of Education, 2014). Elementary Certifications after 1/1/1987 limited the grade level span to K-6, allowing teachers to teach specialist subject areas to students within the self-contained classroom. As of 3/1/1988, Elementary Education and Assignment Scope Elementary K-6 certified teachers were not permitted to teach remedial reading classes but could teach developmental reading at the K-12 grade level, (Pennsylvania Department of Education, 2014). As of 3/1/2014, the certificate area of Grade PK-4 replaced Elementary K-6 (CSPG 41) and Early Childhood N-3 (CSPG #39) (Pennsylvania Department of Education, 2019a).
The grade levels spans reported in the responses to this question may have influenced the curriculum focus of each of the universities that the participants attended in order to gain their certification. In addition, six of the nineteen participants reported holding two or more certifications.

Table 4.5

<table>
<thead>
<tr>
<th></th>
<th>B.A./B.S.</th>
<th>M.S./M.ED.</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree 1</td>
<td>17</td>
<td>0</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>Degree/Certification 2</td>
<td>4</td>
<td>10</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Degree 3</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Degree 4</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Degree/Certification 5</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

*Notes: Other certifications listed included Reading Recovery, Orton-Gillingham (OG) Certification, and Special Education.*

The responses to question six also included the specific degree or certification obtained by the participant. Table 4.5 displays those responses. To help explain the responses included in the table, it is helpful to know that educators can obtain additional certification for specific programs and interventions, such as certifications in Reading Recovery and Orton-Gillingham (OG). To be certified as a Reading Recovery professional, educators must receive a full academic year of graduate-level education followed by ongoing professional development sessions throughout their time in this training, and the level of training varies based on the educators position within the school (Reading Recovery, 2019). Orton-Gillingham Practitioner Certification is guided by
rigorous training with criteria and standards set by the Academy of Orton-Gillingham Practitioners and Educators at four different levels of certification (Orton-Gillingham, 2018). Obtaining these certifications indicates a strong understanding of the components of reading and explicit instruction to assist struggling readers.

One participant additionally listed Special Education as a certification obtained. Because some struggling readers have additional disabilities, it may be beneficial for a specialist to have a strong background knowledge in special education laws and practices.

Table 4.6

| Frequency Count of Question 6: Year Certification or Degree was Obtained |
|-----------------|---|---|---|---|---|
|                 | 1980s | 1990s | 2000s | 2010s | Total |
| Degree/Certification 1 | 5     | 5     | 5     | 1     | 16    |
| Degree/Certification 2 | 2     | 5     | 5     | 4     | 16    |
| Degree/Certification 3 | 0     | 1     | 4     | 0     | 5     |
| Degree/Certification 4 | 0     | 0     | 0     | 1     | 1     |
| Degree/Certification 5 | 0     | 0     | 0     | 1     | 1     |

Table 4.6 further displays the year in which a given degree or certification was obtained. These data provide evidence that the majority of the reading specialists who participated in the study hold at least two certifications. This may be due to certification requirements in the state of Pennsylvania. As stated on the Pennsylvania Department of Education website (2019b) regarding Level II (Permanent) Certification, “Level 1 provisional certificates must be converted to Level II permanent certificates by the end of the validity period by meeting specific requirements.” Although there are more complex guidelines and requirements, the general rule is that an educator must complete three
successful years in a teaching position and “provide evidence of 24 post-baccalaureate semester hour credits, six of which must be associated with the area(s) of certification and/or designed to improve the professional practice of teaching” (Pennsylvania Department of Education, 2019b).

Question 7: Which of the settings do you currently serve? The demographic question was written to explore the types of school settings in which the participants serve. Fifteen participants stated that they teach in the public school system. Two participants reported they teach within a private school system. One specialist (Participant 7) teaches in a charter school setting. One specialist (Participant 13) provides services in both parochial and private schools. The majority of the participants provided services in the public school setting (see Figure 4.3).

Figure 4.3. Circle Graph of Participant's response to Question 7: Which of the settings do you currently serve?
Question 8: Within a given week, estimate about how much of your time (by percentage) is spent working with the following groups of people within your school.

Figure 4.4 depicts the range of percentage of time the reading specialists spent working with teachers. Thirteen participants spent 0-20% of the total weekly time with teachers. One participant spent 20-30% of the total weekly time with teachers. Two participants spent 30-40% of their work time with teachers. One participant spent 40-50% of work time with teachers. The participant who identified as a literacy coach (Participant 3) noted spending 70-80% of the total weekly time with teachers. One participant (Participant 12) indicated spending 80-90% of work time with teachers.
Figure 4.5. Question 8: Within a given week, estimate about how much of your time is spent working with [students].

Figure 4.5 displays the data derived from question 8 regarding the percentage of time spent with students. Seventeen of the 19 participants indicated spending 60% or more of work time with students (see Figure 4.5). The participant who identified as a literacy coach (Participant 3) noted spending 10-20% of her time with students. One participant (Participant 6) indicated spending 40-50% of her time with students.
Figure 4.6. Question 8: Within a given week, estimate about how much of your time is spent working with [parents].

Figure 4.6 provides the responses from question 8 regarding the percentage of time spent with parents. Fifteen participants specified spending 0-10% of the total weekly time with parents, and three participants spent between 10-20% of the total weekly time with parents. All of the participants indicated spending 20% or less of the total weekly time with parents (see Figure 4.6). As a reading specialist, the time allocated to parents remains sparse. Short e-mails, quick phone calls, or a note home is often the extent of parent communication time permits.
Figure 4.7. Question 8: Within a given week, estimate about how much of your time is spent working with administrators.

Figure 4.7 displays the responses from question 8 regarding the percentage of time spent with administrators. Nine participants specified spending 0-10% of the total weekly time with administrators. Five participants indicated spending 10-20% of the total working time with administrators. Four participants specified spending 20-30% of the working time with administrators. One specialist (Participant 12) noted spending 80-90% of the total working time with administrators. As a point of clarification, Participant 12 also indicated 80-90% of the working time with teachers, and 90-100% of the working time with students.
Figure 4.8. Question 8: Within a given week, estimate about how much of your time is spent working with [other].

Figure 4.8 displays the response from question eight regarding the percentage of time spent with other stakeholders. Three participants spent 0-10% of the working time with other stakeholders. One participant spent 10-20% of the working time with other stakeholders. The remainder of the participants did not respond to this question. The researcher interpreted these instances of no response given to this question to mean the participants do not work with other stakeholders during a school day. Some examples of other stakeholders in schools may be staff members such as administrative assistants, security, maintenance, and technology support personnel.
Question nine: With regard to your personal reading, please place a check in the box next to your favorite genre. Only 15.79% of the Reading Specialists checked non-fiction/informational text as their favorite genre (see Figure 4.9). While this study does not assume that professional reading specialists cannot provide quality support to students challenged by a genre that is not their favorite, it might be a small factor that shaped the responses of some of the participants. Since only a small percentage of the participants actually indicated their preference, this information could not be used with any level of confidence to compare or contrast the responses to the open-ended questions by matching them to the participants’ favorite genres.

**Part Two: Response to Vignette Analysis**

In the second section of the response form, the vignette analysis, the participants were asked to read a 260-word passage followed by a summary written by a hypothetical struggling 7th grader. Participants were then asked to respond to a series open-ended questions that required short written answers (Appendix A). The following questions were posed:
10. What problems/challenges are the student having?

11. What evidence would you use to support this decision?

12. What would be your approach to helping this student comprehend this piece of informational text and why?

13. How confident are you that this approach will be effective in helping this reader better approach and comprehend informational text? Provide your reasoning to support your level of confidence.

14. If you are unclear of the approach to take, whom might you consult? Give your reasoning for consulting this person or persons.

Responses given for each of the five questions listed above were coded into categories through the use of key words. That coding varied by question and what follows explains the coding process in further detail. Table 4.7 organizes the coding categories, provides the operational definition for each category and the key words the researcher looked for in a response statement in order to include the response into that specific category. The table also displays how the 19 participants’ responses to Question 10 were coded and categorized. Some responses that were more complicated were coded into multiple categories.
### Table 4.7

**Frequency counts by category of Question 10 - What problems/challenges are the student having?**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Comprehension: To understand or construct meaning from text.</th>
<th>Summarizing: A brief statement that includes the main points of a passage in a concise form.</th>
<th>Orthographic Processing: The conventional spelling system of a language.</th>
<th>Syntax: The way in which words and sentences are placed together.</th>
<th>Genre: A specific type of text defined by style, content, and form. Most commonly texts are sorted by fiction and non-fiction.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Key words: Understand, misunderstand, misinterpret, process/retain/incorrect information, organizing thoughts</td>
<td>Key words: Summarize, main ideas, details, main points</td>
<td>Key word: Spelling</td>
<td>Key words: Sentence Structure, word order, grammar rules (Pronoun usage), writing in complete thoughts, organization</td>
<td>Key Words: Genre, Fiction, Non-Fiction, Plot</td>
</tr>
<tr>
<td>1</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2*</td>
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<tr>
<td><strong>Totals</strong></td>
<td><strong>12/19</strong></td>
<td><strong>9/19</strong></td>
<td><strong>7/19</strong></td>
<td><strong>9/19</strong></td>
<td><strong>5/19</strong></td>
</tr>
</tbody>
</table>

*Identified phonics as the problem/challenge.

**Identified vocabulary as the problem/challenge.

***Identified the problem/challenge as specific skills such as identifying and author’s point of view. Also identifies strategies of inferencing and clarifying as issues.
The first short-answer question challenged the participants to identify the specific reading challenge the student was facing. Statements that included the specific key words listed in Table 4.7 under each category were assigned to the category or categories that emerged: Comprehension, Summarizing, Orthographic Processing, Genre, and Syntax. The researcher made multiple passes through the statements to identify clusters of statements into categories and then used the common language of those statements to create the key word lists for each category. Statements that could not fit into existing categories required the researcher to create a new category and then assess the statements again to see if they fit into the new category as well. Table 4.7 displays each of the final categories along with the key words that served as criteria for including a statement into the category. Then, the researcher defined each category as it operated in the analysis. A further discussion of each category follows.

The first category included in Table 4.7, Comprehension, was operationally defined as understanding or constructing meaning from the text. Statements included in this category contained the following key word(s): understand, misunderstand, misinterpret, process information, retain information, and/or organizing thoughts. Using these criteria, sixteen of the nineteen participants indicated comprehension as an issue for the struggling reader.

The second category, Summarizing, was operationally defined as a brief statement that includes the main points of a passage in a concise form. Statements included in this category contained following key word(s): summarizing, main ideas, details, or main points as the main ideas/points and details are the making of an informational text.
summary. Using these criteria, eight of the nineteen participants indicated summarizing as an issue for the struggling reader.

The third category, Orthographic Processing, was defined as the visual system to form, store, and recall words. It allows a reader to utilize the conventional spelling system of a language. The only key word used to code orthographic processing was spelling. Using this criteria, seven of the nineteen participants indicated orthographic processing as an issue for struggling reader.

Syntax, the fourth category, was defined as the way in which words and sentences are placed together. Statements included in this category had the following key word(s): sentence structure, word order, grammar rules, organization, or writing in a complete thought. Using these criteria, seven participants mentioned in their statements that the student was struggling with syntax.

The final category, Genre, was operationally defined a specific type of text defined by style, content, and form. Most commonly, texts are sorted by fiction and nonfiction. Statements included in this category had the following key words: genre, fiction, non-fiction, and plot. Five of the participants mentioned genre as the problem or issue the student was having.
Table 4.8

*Question 10: What problems/challenges are the student having?*
*Individual responses from participants with code used and key words in bold.*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Responses with key words bolded</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The student has challenges of <strong>summarizing</strong> the text. They struggle with finding the most <strong>important details</strong>. The <strong>details</strong> are incorrect. The student does not write in <strong>complete sentences</strong>.</td>
<td>Summarizing, Syntax, Details/facts</td>
</tr>
<tr>
<td>2</td>
<td>This student has some <strong>phonic</strong> issues which are affecting his <strong>comprehension</strong> of what he/she read.</td>
<td>Phonics</td>
</tr>
<tr>
<td>3</td>
<td><strong>Comprehending</strong> the <strong>details</strong> of the passage.</td>
<td>Details</td>
</tr>
<tr>
<td>4</td>
<td><strong>Spelling/ misinterpretation</strong> of factual information possibly from reading too quickly</td>
<td>Comprehension, Ortho. Processing</td>
</tr>
<tr>
<td>5</td>
<td><strong>organizing thoughts/facts; writing in complete thoughts</strong></td>
<td>Syntax, Comprehension, Summarizing</td>
</tr>
<tr>
<td>6</td>
<td>First of all, this student does not have a full <strong>understanding</strong> of the <strong>genre of the text</strong>. The seventh grader uses the word &quot;**plot,&quot;&quot; rather than words like &quot;central idea&quot; and &quot;key details.&quot; Also, he did not cohesively write the paragraph with <strong>correct transitions</strong> and <strong>sentence structure</strong>. He focused on the <strong>gist of the article</strong> and wrote down thoughts. Also, the student may be struggling to write the &quot;summary&quot; due to his/her <strong>inability to write effectively</strong>.</td>
<td>Main Ideas, Summarizing, Genre, Syntax</td>
</tr>
<tr>
<td>7</td>
<td>Composing sentences, spelling of common words, or using the text to check spelling of words in the text, accurately <strong>comprehending</strong> what was read.</td>
<td>Comprehension, Syntax, Orthographic Processing</td>
</tr>
<tr>
<td>8</td>
<td><strong>Understanding/processing information. Vocabulary meaning.</strong></td>
<td>Vocabulary, Comprehension</td>
</tr>
<tr>
<td>9</td>
<td>This student possibly finds it challenging to <strong>retain information</strong> accurately, or <strong>struggles to take in what he/she read, make sense of it in his/her mind, and then put it down in his/her own words on paper.</strong> Or it could be a <strong>vocabulary</strong> issue - &quot;non exsident&quot; vs. <strong>extinct</strong>?</td>
<td>Recall, Understanding and Use of Information, Vocabulary, Comprehension</td>
</tr>
<tr>
<td>10</td>
<td><strong>sentence structure, spelling, poor introduction</strong></td>
<td>Syntax, Orthographic Processing, Summarizing</td>
</tr>
<tr>
<td>11</td>
<td>They are able to give specific details, but they <strong>do not understand</strong> how to <strong>summarize</strong> to capture the <strong>main ideas</strong> of the text.</td>
<td>Main Idea, Summarizing, Comprehension</td>
</tr>
<tr>
<td>12</td>
<td>The student is having trouble with <strong>spelling</strong> as well as <strong>comprehending</strong> the later part of the passage.</td>
<td>Comprehension, Orthographic Processing</td>
</tr>
<tr>
<td>13</td>
<td>The student is having difficulty identifying the <strong>main idea</strong> of the passage and adding the <strong>important details</strong>.</td>
<td>Summarizing, Comprehension</td>
</tr>
<tr>
<td>14</td>
<td>difference between plot (<strong>fiction</strong>) and main idea (<strong>informational</strong>), lack of clear <strong>pronoun usage</strong>, some <strong>spelling</strong> issues</td>
<td>Genre, Orthographic Processing, Syntax, Main Idea</td>
</tr>
<tr>
<td>15</td>
<td>They are using <strong>plot</strong> for <strong>summary</strong></td>
<td>Summarizing, Genre</td>
</tr>
<tr>
<td>16</td>
<td>incorrect <strong>information</strong>, organization, <strong>spelling</strong> and <strong>grammar</strong></td>
<td>Comprehension, Syntax, Orthographic Processing, Details</td>
</tr>
<tr>
<td>17</td>
<td>Comprehension of specific details. Understanding of &quot;<strong>plot</strong>&quot; - could be a teaching issue, though, as plot does not apply to informational text. Minor writing errors (spelling/sentence structure).</td>
<td>Comprehension, Syntax, Orthographic Processing, Genre</td>
</tr>
<tr>
<td>18**</td>
<td>The student mentioned <strong>plot in the summary and plot is a term more commonly used with fiction text</strong>. The student needs to <strong>organize</strong> their <strong>summary</strong> notes into <strong>main ideas</strong>. At this point, the student needs to state the author's purpose and also the author's point of view. For example, the author called the sharks, &quot;impressive.&quot; The student needs to reflect on the point of view to make an inference that may be included in the summary. The student also needs to work on clarifying. The student mentioned &quot;<strong>details</strong>&quot; in his summary. The student could learn to reread and clarify the supporting details.</td>
<td>Author’s Point of View, Details, Comprehension, Summarizing, Genre, Syntax</td>
</tr>
<tr>
<td>19</td>
<td><strong>Understanding main idea, summarizing</strong></td>
<td>Summarizing, Comprehension, Main Idea</td>
</tr>
</tbody>
</table>

The researcher further analyzed the specific comments from each participant as shown in Table 4.8. Some responses did not fit into the one of the five categories. This was because the response did not match any of the other responses from other participants rendering the statement as a stand-alone conclusion because only one participant indicated it as a need. These stand-alone statements were provided by Participant 18 who mentioned specific skills such as identifying author’s purpose and
author’s point of view and the strategies of inferencing and clarifying; Participant 2 who mentioned phonic issues as the cause of the student’s comprehension issues; and, Participant 18 who mentioned a process with various skills and strategies but failed to identify the problem(s) the student was facing. Overall, as shown in Table 4.8, a majority of the participants identified comprehension, specifically the skill of creating a summary, as a specific problem the student was facing.

Table 4.9

Frequency counts by category of Question 11: What evidence would you use to support this decision?

<table>
<thead>
<tr>
<th>Participant</th>
<th>Comprehension: To understand or construct meaning from text. Specially the ability to summarize and/or identify main ideas, details, or facts</th>
<th>Syntax: The way in which words and sentences are placed together.</th>
<th>Genre: A texts category defined by style, content, and form. Most commonly texts are sorted by fiction and non-fiction.</th>
<th>Orthographic Processing: The conventional spelling system of a language.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>2</td>
<td></td>
<td>X</td>
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<td>3</td>
<td>X</td>
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<td>4</td>
<td>X</td>
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<tr>
<td>17</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>18</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Question 11: What evidence would you use to support this decision? The short answer responses were again coded for key words, resorted to better reflect the responses a second time, and then placed in categories and analyzed. The main key words used included: *incomplete sentences, word choice, spelling, incorrect facts, missing main idea or details, and the misuse of the word ‘plot’*. The categories through the analysis included: *comprehension, syntax, genre, and orthographic processing*. The key words were the main pieces of evidence each participant identified in the student’s response to the piece of informational text in the vignette (Table 4.9). Sixteen of the participants identified issues with comprehension and focused mainly on summarizing and identifying main ideas and details. Participants eight and twelve mentioned the student reversed facts. The reasoning Participant twelve used was, “[The student] said elephants could bite it in half instead of biting an elephant in half” (see Table 4.10). Participant 19 mentioned the student did not put the text into his own words.
Table 4.10

*Individual responses from Participants of Question 11 - What evidence would you use to support this decision?*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Responses with key words in bold</th>
<th>Category or Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The details do not match the text. The <strong>sentences are incomplete.</strong> The <strong>details are not the most important ones.</strong> This student just listed bits and pieces of the text.</td>
<td>Syntax, Comprehension</td>
</tr>
<tr>
<td>2</td>
<td>Words such as creature, half and whales.</td>
<td>Orthographic Processing [Note: Creature, half, and whales were spelled incorrectly in the student passage.]</td>
</tr>
<tr>
<td>3</td>
<td><strong>Incorrect facts</strong> such as the &quot;elephant would bite it in half&quot;. This <strong>information is incorrect and not clear.</strong></td>
<td>Comprehension</td>
</tr>
<tr>
<td>4</td>
<td><strong>Misinterpretation of text information/spelling from text</strong></td>
<td>Orthographic Processing, Comprehension</td>
</tr>
<tr>
<td>5</td>
<td>included <strong>random facts</strong> in <strong>incomplete sentences</strong></td>
<td>Syntax, Comprehension</td>
</tr>
<tr>
<td>6</td>
<td>The student <strong>uses the word &quot;plot&quot;</strong> at the beginning of the summary. He/She begins a sentence with &quot;Ate whales...&quot; This shows that the student is <strong>just jotting down information</strong>, instead of <strong>writing it in sentence form.</strong></td>
<td>Comprehension, Syntax, Genre</td>
</tr>
<tr>
<td>7</td>
<td>The student's <strong>sentence structure, misspelling of words</strong> used in the passage, a <strong>misstated fact</strong> in the student's response.</td>
<td>Comprehension, Syntax, Orthographic Processing</td>
</tr>
<tr>
<td>8</td>
<td><strong>Reversing facts</strong> in the story when comparing and contrasting <strong>details</strong></td>
<td>Comprehension</td>
</tr>
<tr>
<td>9</td>
<td>He/she has some of the <strong>information, but it is inaccurate</strong> - switched around. &quot;elephants would bite it in half!&quot; whereas the text said it [the shark] would bite an elephant in half. Also the shark was &quot;non exsident&quot; so <strong>processing the information</strong> about it being extinct.</td>
<td>Comprehension</td>
</tr>
<tr>
<td>10</td>
<td>by reading the paragraph, you can tell the student does <strong>not complete ideas.</strong> they are throwing ideas into the paragraph but <strong>not following thru on completing the thought.</strong></td>
<td>Comprehension</td>
</tr>
<tr>
<td>11</td>
<td>The <strong>never address the main idea and are unable to summarize.</strong> They are just <strong>repeating details in the text.</strong></td>
<td>Comprehension</td>
</tr>
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<td></td>
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</tr>
<tr>
<td>12</td>
<td>Wales, exsident, creacher, haf are <strong>spelled wrong</strong> although phonetically correct. They said elephants could bite it in half instead of biting an elephant in half. [Reversing facts] They <strong>confused</strong> the length of the Megalodon.</td>
<td>Comprehension, Orthographic Processing</td>
</tr>
<tr>
<td>13</td>
<td>The student didn't mention anything about the megaladon becoming extinct.</td>
<td>Comprehension</td>
</tr>
<tr>
<td>14</td>
<td><strong>plot vs. main idea</strong>: &quot;the plot is telling details&quot; <strong>pronoun issues</strong>: over use of it with no clear antecedent spelling: wales (diagraphs), creacher, half</td>
<td>Genre, Orthographic Processing, Syntax, Comprehension</td>
</tr>
<tr>
<td>15</td>
<td>The word &quot;plot&quot;</td>
<td>Genre</td>
</tr>
<tr>
<td>16</td>
<td>The <strong>details provided are incorrect</strong> &quot;elephants would bite it in half&quot; <strong>Organization</strong> - does not follow sequence of passage <strong>Spelling and grammar</strong> &quot;crechure&quot;</td>
<td>Comprehension, Syntax, Orthographic Processing</td>
</tr>
<tr>
<td>17</td>
<td><strong>Comprehension</strong>: Student inferred that the shark is non-existent (as opposed to extinct), &quot;elephants would bite it in half&quot; <strong>Plot understanding</strong>: labeled the summary &quot;Plot&quot; <strong>Writing errors</strong>: creacher, exsident, sentences 3 &amp; 4 are fragments.</td>
<td>Comprehension, Syntax, Genre, Orthographic Processing</td>
</tr>
<tr>
<td>18</td>
<td>The student used the word &quot;plot.&quot; The student did not clearly state any main ideas or a central idea. The student did list some supporting details, but one of the details about the elephant was wrong which indicates that they need to clarify.</td>
<td>Comprehension, Genre</td>
</tr>
<tr>
<td>19</td>
<td>Student is <strong>not writing in complete sentences</strong> and is <strong>not putting text into own words.</strong></td>
<td>Syntax, Comprehension</td>
</tr>
</tbody>
</table>

Table 4.10 includes each participant’s full response to the open-ended question.

The key words used to create categories are bolded within each participant’s response to further illustrate the multiple coding process used by the researcher. Participants focused on the issues of comprehension, syntax, genre, and orthographic processing.
Table 4.11

*Question 12: What would be your approach to helping this student comprehend this piece of informational text and why?*

**Categories, Sub-Categories, and Key Words**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Category: Comprehension Strategy Instruction</th>
<th>Category: Scaffolding</th>
<th>Genre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sub-Category: Comprehension Strategy Instruction</td>
<td>Sub-Category: Scaffolding</td>
<td>Sub-Category: Genre</td>
</tr>
<tr>
<td></td>
<td>Key Words: Reciprocal Teaching, Guided Reading, Before During After Instructional Routines, Modeling, Pre-Reading</td>
<td>Key Words: Note-Taking Annotating Text</td>
<td>Key Words: Chunking Text, Key Words: Reading, Re-Reading, Read Aloud, Multiple close reads</td>
</tr>
<tr>
<td>1</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2</td>
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<td>18</td>
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</tr>
<tr>
<td>19</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Totals:** 6/19 8/19 3/19 2/19 10/19 5/19 6/19 11/19 4/19

**Outliers** – One participant mentioned peer editing to correct grammar and spelling.
Question 12 asked the participants: What would be your approach to helping this student comprehend this piece of informational text and why? This short-answer question was asked to learn more about the reasoning and various approaches a reading specialist might use in order to help a student comprehend a piece of informational text. The researcher coded the answers through the use of the key words, categories, and sub-categories displayed in Table 4.11. The responses were categorized into 3 different categories: Comprehension Strategy Instruction, Scaffolding, and Genre. The key words were then sorted into sub-categories. Comprehension Strategy Instruction included the following sub-categories: Summarize, clarify, question, or specific mention of a comprehension strategy instruction model, such as reciprocal teaching. Scaffolding included the following sub-categories: graphic organizer, note-taking and/or annotating text, repeated reading and/or read alouds, and chunking text.

<p>| Table 4.12 |
| Specific Participant Responses to Question 12: What would be your approach to helping this student comprehend this piece of informational text and why? |</p>
<table>
<thead>
<tr>
<th>Participant</th>
<th>Responses with key words in bold</th>
<th>Sub-Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The teacher needs to <strong>scaffold instruction</strong> to help this student make gains in reading informational text. I would give the student these <strong>strategies</strong>: 1. <strong>Read the entire text.</strong> You may need to <strong>reread several times.</strong> 2. <strong>Highlight or underline key details.</strong> 3. Use <strong>graphic organizers.</strong> 4. <strong>Restate what the author has written. Use your own words.</strong> 5. Go back and <strong>check your details</strong> and the ones in the text to make sure that they match. 6. <strong>Build instructional routines</strong> when dealing with text.</td>
<td>Comprehension Strategy Instruction, Graphic Organizer, Note-Taking, Text Features,</td>
</tr>
<tr>
<td>2</td>
<td>I would have the student read the story out loud and <strong>stop after each paragraph</strong> and ask a <strong>quick question</strong> about that paragraph before going onto reading the next paragraph.</td>
<td>Chunking Text, Read Aloud</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>---</td>
<td>---</td>
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</tr>
<tr>
<td>3</td>
<td>I would introduce <strong>marginal notes</strong>. I would model and <strong>show how to make notes after each paragraph</strong>.</td>
<td>Annotating Text, Chunking Text, Teacher Modeling</td>
</tr>
<tr>
<td>4</td>
<td><strong>Marginal note from each paragraph</strong>- small fact from each paragraph</td>
<td>Annotating Text, Chunking Text</td>
</tr>
<tr>
<td>5</td>
<td>I would <strong>read the text with this student</strong> to identify any errors in reading that might impact comprehension and <strong>ensure the student understood the passage</strong>. Then I would have the student reread the text and <strong>annotate for key information</strong>. Given the shorter length of the passage, I would do this over two readings. As part of the annotation process, I would then have them write a &quot;big idea&quot; for each paragraph in the margin. I would then help them <strong>turn each big idea into a complete sentence to write a summary</strong>.</td>
<td>Annotating Text, Chunking Text, Repeated Reading, Summarize</td>
</tr>
<tr>
<td>6</td>
<td>I would start my providing the student with instruction on informational text and the <strong>key features of this type of text</strong>. The student would also need instruction on <strong>text structure</strong> as well as how to write a paragraph using correct transitions. Furthermore, before having the student read the text, I would have him/her do some <strong>pre-reading strategies</strong>. Then I would read the student the text for a first read. <strong>For the second read</strong>, I would have the student create a <strong>graphic organizer</strong>, such as a T chart, so that he/she can <strong>take notes while re-reading</strong>. This student should also closely read the text and take notes while reading. It would help if the text was <strong>chunked</strong>, so that I could make sure he stops and thinks about the main idea of each paragraph. After the second read and notes have been made, I would <strong>model how to write a summary</strong> using the graphic organizer, but see if he/she is able to <strong>verbally tell me a summary first</strong>.</td>
<td>Teacher Modeling, Summarize, Text Features, Chunking Text, Graphic Organizer, Annotating Text; Repeated Reading</td>
</tr>
<tr>
<td>7</td>
<td>Have the student <strong>read each paragraph separately and do a retell</strong>. For the written response, have the student <strong>reread a paragraph at a time</strong> and write about it making sure the student is <strong>checking spelling</strong> with the passage.</td>
<td>Chunking Text, Repeated Reading</td>
</tr>
<tr>
<td>8</td>
<td><strong>Break the paragraphs into smaller segments</strong> for reading. <strong>Stop and discuss</strong> after a few sentences. <strong>Discuss vocabulary</strong> before reading. <strong>Kwl charts</strong> to gain what student knows <strong>prior to reading</strong></td>
<td>Chunking Text, Strategy Instruction, Vocabulary, Question</td>
</tr>
<tr>
<td>9</td>
<td><strong>Break down the text</strong> - paragraph by paragraph. <strong>Identify main idea and details</strong> from each paragraph. Create a heading for each paragraph - combine the headings to <strong>create a summary</strong>. <strong>Discuss vocabulary</strong> - try to remedy any misconceptions/misunderstandings.</td>
<td>Chunking Text, Vocabulary; Summarize; text Features</td>
</tr>
<tr>
<td></td>
<td>Address that a <strong>summary is different w/nonfiction than fiction - main ideas vs. plot.</strong></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>10</td>
<td><strong>breaking down each paragraph</strong> and finding the main idea of each paragraph and the supporting details and then in their own words, writing the report.</td>
<td><strong>Chunking Text,</strong></td>
</tr>
<tr>
<td>11</td>
<td>I would have the students try to use a <strong>summary frame</strong> at first. This <strong>graphic organizer helps them to summarize</strong> using a sentence starter. The sentence starters help them to understand what they are looking for when asked to summarize.</td>
<td><strong>Summarize, Graphic Organizer</strong></td>
</tr>
<tr>
<td>12</td>
<td>I would <strong>break it into smaller chunks</strong> of information. I'd have the student <strong>make a chart to compare</strong> the Megalodon.</td>
<td><strong>Chunking Text Graphic Organizer</strong></td>
</tr>
<tr>
<td>13</td>
<td>I would <strong>teach the student how to identify the main idea.</strong> <strong>Teach vocabulary words</strong> that are important to the understanding of the text. Teach the student how to <strong>summarize.</strong></td>
<td><strong>Strategy Instruction, Summarize, Vocabulary</strong></td>
</tr>
<tr>
<td>14</td>
<td>I would have the student <strong>chunk the text by paragraphs.</strong> After reading each paragraph, I'd have her <strong>write a 1 sentence summary of what that paragraph was about/the most important information.</strong> I'd also have her write a heading for each paragraph/section. We'd then make an <strong>organizer or chart showing the elements of fictions vs the elements of informational text.</strong></td>
<td><strong>Chunking Text Summarize, Text Features, Graphic Organizer</strong></td>
</tr>
<tr>
<td>15</td>
<td>Distinguishing Non-Fiction from Fiction Comparing <strong>Fiction/nonfiction text structures Graphic Organizers</strong></td>
<td><strong>Text Features, Graphic Organizer</strong></td>
</tr>
<tr>
<td>16</td>
<td>To help the student w/ comprehension and providing the correct details I would use <strong>multiple close reads,</strong> each with a different focus. <strong>Teaching objective summaries prior to this task.</strong> Also, offering an &quot;<strong>emergency kit</strong>&quot; if the student needed scaffolds for writing. (to support organization) Peer editing to correct grammar and spelling.</td>
<td><strong>Repeated Reading, Summarize, Peer Editing; Graphic Organizer</strong></td>
</tr>
<tr>
<td>17</td>
<td>First, set a <strong>purpose for reading.</strong> It is the best way to put a struggling reader's mind into the right frame and focus the brain on the important details. Teach, model, and use before-during-after reading strategies. The student correctly recalled some details but got some details mixed up. A <strong>focused approach to comprehension with B-D-A would support this student's recall.</strong></td>
<td><strong>Teacher Modeling, Strategy Instruction</strong></td>
</tr>
</tbody>
</table>
I would use **Reciprocal Teaching** by asking the students to apply the four reading strategies (predicting, clarifying, questioning, and summarizing) before, during, and after reading. After a **scaffolded discussion**, I would help the student organize their thoughts into a **graphic organizer**. If needed, we would review **main idea and author's point of view**.

Using **graphic organizers** to sort information, also need to model for students how to **pull out important information**.

<table>
<thead>
<tr>
<th>18</th>
<th>I would use <strong>Reciprocal Teaching</strong> by asking the students to apply the four reading strategies (predicting, clarifying, questioning, and summarizing) before, during, and after reading. After a <strong>scaffolded discussion</strong>, I would help the student organize their thoughts into a <strong>graphic organizer</strong>. If needed, we would review <strong>main idea and author's point of view</strong>.</th>
<th>Strategy Instruction, Graphic Organizer</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Using <strong>graphic organizers</strong> to sort information, also need to model for students how to <strong>pull out important information</strong></td>
<td>Teacher Modeling, Graphic Organizer</td>
</tr>
</tbody>
</table>

Table 4.12 displays each participant’s full response to the open-ended question along with the categories, key words, and sub-categories. Some wording was intentionally left not bolded if it was repetitive or written to clarify meaning. It was during this phase of the coding process to identify the key words and sub-categories that researcher noticed that some participants did not provide the reasoning they used to arrive at their designated approach.

The seven participants who included evidence and/or reasoning are displayed below in Table 4.13 along with the portions of their statements that indicated reasoning and evidence highlighted in italics.

<table>
<thead>
<tr>
<th>Table 4.13</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Participant responses to Question 12 who noted approach to help a student comprehend the piece of informational text with evidence to support their conclusions.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Participant</th>
<th><strong>Approach Given with Reasoning in Italics</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The teacher needs to scaffold instruction to <strong>help this student make gains in reading informational text.</strong></td>
</tr>
<tr>
<td>5</td>
<td>I would read the text with this student to <strong>identify any errors in reading that might impact comprehension and ensure the student understood the passage</strong></td>
</tr>
<tr>
<td>6</td>
<td>For the second read, I would have the student create a graphic organizer, such as a T chart, <strong>so that he/she can take notes while re-</strong></td>
</tr>
</tbody>
</table>
reading. It would help if the text was chunked, so that I could make sure he stops and thinks about the main idea of each paragraph.

8 Kwl charts to gain what student knows prior to reading

16 To help the student w/ comprehension and providing the correct details I would use multiple close reads, each with a different focus. Also, offering an "emergency kit" if the student needed scaffolds for writing. (to support organization) Peer editing to correct grammar and spelling.

17 First, set a purpose for reading. It is the best way to put a struggling reader's mind into the right frame and focus the brain on the important details. Teach, model, and use before-during-after reading strategies. The student correctly recalled some details but got some details mixed up. A focused approach to comprehension with B-D-A would support this student's recall.

19 Using graphic organizers to sort information, also need to model for students how to pull out important information

Participants who provided evidence and/or reasoning are included in the Table 4.13. The key words “to” or “so that” were used as indicators that the reading specialist provided reasoning. The remaining twelve participants did not indicate evidence and/or reasoning to support their choice of approach.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Decoding</th>
<th>Verbal Encoding</th>
<th>Written Encoding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Read; Re-Read</td>
<td>Restate what the author has written. Use your own words.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Read story aloud</td>
<td>Respond to teacher questioning</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Marginal Notes</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Marginal Notes</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Read the text with the student; Re-read</td>
<td>Annotate; Write a big idea; Write a summary</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Read the text twice</td>
<td>Verbal summary</td>
<td>Note taking during reading; creating of</td>
</tr>
<tr>
<td>7</td>
<td>Read each paragraph</td>
<td>Verbal retell</td>
<td>Write about each paragraph, checking spelling</td>
</tr>
<tr>
<td>---</td>
<td>---------------------</td>
<td>--------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>8</td>
<td>Break down into smaller segments</td>
<td>Stop and discuss</td>
<td>Creation of KWL Chart</td>
</tr>
<tr>
<td>9</td>
<td>Break down text into smaller paragraphs</td>
<td>Discuss vocabulary</td>
<td>Create headings for each paragraph; Combine headings to create summary</td>
</tr>
<tr>
<td>10</td>
<td>Breaking down each paragraph and find main idea/supporting details</td>
<td></td>
<td>Write a report in their own words</td>
</tr>
<tr>
<td>11</td>
<td>Break into smaller chunks</td>
<td></td>
<td>Summary Frame graphic organizer with sentence starters</td>
</tr>
<tr>
<td>12</td>
<td>Teacher explanation of main idea, vocabulary, summarizing</td>
<td></td>
<td>Make a chart to compare</td>
</tr>
<tr>
<td>13</td>
<td>Chunk the text by paragraphs</td>
<td></td>
<td>Write a one sentence summary of each paragraph. Write a heading for each paragraph/section. Make an organizer/chart showing elements of fiction vs informational text.</td>
</tr>
<tr>
<td>15</td>
<td>Compare Fiction/Non-Fiction; Graphic Organizers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Multiple close reads, each with a different focus.</td>
<td></td>
<td>Objective summary with “emergency kit” and peer editing</td>
</tr>
<tr>
<td>17</td>
<td>Teacher sets a purpose for reading; Teacher use of Before-During-After Strategies</td>
<td>Student Recall</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.14 provides another perspective of the data derived from the participants’
response to question 12. Participants noted various approaches taken to provide
intervention support to students struggling to comprehend informational text. The
approaches mentioned were categorized into the processes of decoding and encoding.
The process of decoding information includes the reading, re-reading, and taking in of
information. Decoding also includes declarative and procedural processes (Almasi,
2003). Encoding includes the conditional knowledge that allows a reader to think
strategically (Paris, Lipson, & Wixson, 1983). Because verbal encoding and written
encoding require different processing skills and strategies, they are illustrated as two
separate sub-categories of the decoding process (see Table 4.14).

Participants described various applications of the decoding process, such as
reading, re-reading, and chunking the text to reduce processing demands (Almasi, 2003).
Participants additionally mentioned various applications of the verbal and written
encoding process. Based on the participant responses overall to question 12, the
specialists would ask the struggling student in the vignette to verbally discuss, recall,
retell, respond, or summarize the text with varying levels of support from the specialist.
These actions represent levels one and two in Webb’s depth of knowledge, and remember
and respond levels of Bloom’s Taxonomy (Hess, Jones, Carlock, and Walkup, 2009).
Fifteen of the nineteen participants described written encoding tasks for the student, such as the construction of a response using a graphic organizer, note-taking, annotations, written summaries, and varying reports of learned content. Absent from the participants’ responses is the mention of quality learning targets that guide the teacher and student in the gathering of evidence to increase student achievement (Moss & Brookhart, 2012; 2015).

The vignette was written on levels 1 and 2 depth of knowledge (DOK), as (Hess, Jones, Carlock, and Walkup, 2009). In Question 10, participant 18 identified the problem/challenge as identifying the author’s point of view (see Table 4.7). This level 3 DOK skill may serve as a future goal for the struggling reader, but the cognitive demands may be too high for this struggling reader. As noted above, participants mentioned more immediate needs, such as decoding, that are appropriate for a struggling reader.

In Moss and Brookhart’s view (2012; 2015; 2019), learning targets contain specific success criteria that students can use to monitor and adjust their work as they are learning and working; thus promoting student self-assessment and self-regulation. Struggling students often do not profit from teacher suggestions or direction since they have not grasped the nuances of important processes like annotating and summarizing. Clear learning targets unpack and describe the steps, elements, or parts of these important processes in language the students can understand eliminating what the authors describe as students “flying blind” in the classroom without a clear understanding of what the
teacher is asking them to do. and the confidence that they can do it.

Figure 4.10. Question 13: How confident are you that this approach will be effective in helping this reader better approach and comprehend informational text? Provide your reasoning to support your level of confidence.

Question 13 asked the participants to both explain their level of confidence and provide reasoning to support their reported confidence levels. Of the nineteen participants only twelve directly stated confidence levels. Four participants explicitly rated themselves as very confident, seven stated they were confident, and one participant described being fairly confident. Three participants provided reasoning only without mentioning a level of confidence, and three participants communicated the need for more data to increase their confidence in the approach taken (see Figure 4.10).

Table 4.15

<table>
<thead>
<tr>
<th>Participant</th>
<th>Responses with key words in bold and reasoning in italics</th>
<th>Categories</th>
</tr>
</thead>
</table>

Specific Individual responses for Question 13: How confident are you that this approach will be effective in helping this reader better approach and comprehend informational text? Provide your reasoning to support your level of confidence.
<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>Reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I am <strong>confident</strong> that modeling and scaffolding in the key to instruction. <em>Give the student tools to help with organizing the details. Summarizing needs practice and over time some of the scaffolds can be removed.</em></td>
<td>Confident; Reasoning</td>
</tr>
<tr>
<td>2</td>
<td>Since informational text is full of facts it takes longer to read and absorb the facts.</td>
<td>Reasoning only</td>
</tr>
<tr>
<td>3</td>
<td>I am <strong>confident</strong> it would slow the reading process down so the student can think about smaller chunks of information at one time. This would help the students process the information slower and hopefully more in-depth.</td>
<td>Confident; Reasoning</td>
</tr>
<tr>
<td>4</td>
<td>This will provide a way to think about each paragraph, possibly help to read slower</td>
<td>Reasoning only</td>
</tr>
<tr>
<td>5</td>
<td>This is a strategy I use with students, and it typically proves helpful in helping them read and summarize text.</td>
<td>Reasoning only</td>
</tr>
<tr>
<td>6</td>
<td>I am <strong>very confident</strong> this approach will help because if a student knows what informational text is, knows how to use pre, during, and after reading strategies to help comprehend the text, can identify the text structure, and create an appropriate graphic organizer, then this student should be able to read the text, which is above his/her level, with lesser difficulties.</td>
<td>Very Confident; Reasoning</td>
</tr>
<tr>
<td>7</td>
<td>Every student is different. However, chunking the information helps the students to remember events/details more accurately than doing so after reading a whole passage. I am <strong>fairly confident</strong> that this approach can be successful. Whether or not a student chooses to utilize it independently is another thing.</td>
<td>Fairly Confident; Reasoning</td>
</tr>
<tr>
<td>8</td>
<td>Finding what a student's prior knowledge will help with vocabulary and interest level.</td>
<td>Reasoning only</td>
</tr>
<tr>
<td>9</td>
<td>*This is one piece of information - one piece of data - that does not create a very clear picture of a student. This could help remedy this issue in this instance - but not necessarily the big picture for this student - <em>more information would be needed.</em></td>
<td>Need more data; Reasoning</td>
</tr>
<tr>
<td>10</td>
<td>I think I would feel <strong>very confident</strong>. While reading each paragraph we would discuss the information to help comprehend and clarify the report.</td>
<td>Very Confident; Reasoning</td>
</tr>
<tr>
<td>11</td>
<td>I feel <strong>very confident</strong> it will work because they need to scale it back first and understand what it means to summarize and what details to include.</td>
<td>Very Confident; Reasoning</td>
</tr>
<tr>
<td>12</td>
<td>Not knowing his/her circumstances and never having worked with a 7th grader, I would think <strong>this could be a starting point.</strong> Visuals usually help a lot of students so seeing the comparisons may help.</td>
<td>Need more data; Reasoning</td>
</tr>
<tr>
<td>13</td>
<td>I am <strong>confident</strong> that the approach would work using the I Do, We Do, You Do model, and repetitive practice.</td>
<td>Confident; Reasoning</td>
</tr>
</tbody>
</table>
I think that my approach would be a start in helping the student recognize the different in fiction and informational text. I believe the student would need multiple exposures to the approach using informational texts. I am confident that with repetition, the student would gain a better understanding of informational text elements.

I have taught fiction/nonfiction in varying grades. The first thing is being able to distinguish the differences. Then scaffold-what text structure goes with what story. Then...go on to summary

I would be confident that these would be effective. They are strategies that address all areas of concern.

Very confident. Students can be taught to set their own purpose for reading and apply before-during-after reading strategies to any text, which builds independent readers.

I am confident that Reciprocal Teaching is helpful because it is research-based. However, I do not know enough about this student to say it would support them during independent reading. Further information would need to be gathered to measure the student's ability to use strategies independently. As expository text gets more complicated, students need support to find main ideas/central idea in the text and to make inferences.

I am confident this method would work. I have used the I do, We do, You do approach and it works well. Model for the student how to pull out information and annotate the text.

Table 4.15 provides the full response of each participant with the confidence level bolded and the description of the participant’s reasoning in italics. The participants’ responses were furthered analyzed to gather the following generalizable themes:

- Modeling and scaffolding are keys to instruction;
- Comprehension of informational text is a complex process that takes time with a release of support; and
- Repeated practice is needed with background knowledge of the topic and strategies.
Experience and prior use of a given strategy seemed to increase the confidence level of the participant, while others felt more information was needed before drawing additional conclusions about the struggling pseudo student.

Figure 4.11. Participant’s responses to Question 14: If you are unclear of the approach to take, whom might you consult? Give reasoning for consulting this person or persons.

**Question 14:** If you are unclear of the approach to take, whom might you consult? Give reasoning for consulting this person or persons. Figure 4.11 provides a bar graph that organizes the participants’ responses. Seven of the participants identified the consultation with a colleague. Ten of the participants identified consultation with another reading specialist. One participant would consult with a parent, and one participant would consult directly with the student in question. Although the question only asked whom the participant would consult, three participants noted the consultation of research through a variety of methods.
Table 4.16

*Question 14: If you are unclear of the approach to take, whom might you consult? Give your reasoning for consulting this person or persons.*

<table>
<thead>
<tr>
<th>Participants</th>
<th>Responses with Reasoning in bold</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I would consult another reading specialist to see if they could share some strategies. I would also try to work with this student one on one and model how to write a summary.</td>
<td>Other Reading Specialists, The Student in Question</td>
</tr>
<tr>
<td>2</td>
<td>I would consult the other reading specialist I work with.</td>
<td>Other Reading Specialists</td>
</tr>
<tr>
<td>3</td>
<td>I would also consult with the reading teacher at grade level and the above grade level for ideas as well.</td>
<td>Reading Teacher</td>
</tr>
<tr>
<td>4</td>
<td>I would ask other reading teachers/classroom teacher as to what steps/strategies they may have already tried.</td>
<td>Reading Teacher, Other Reading Specialists</td>
</tr>
<tr>
<td>5</td>
<td>I would consult with a competent colleague.</td>
<td>Colleague</td>
</tr>
<tr>
<td>6</td>
<td>I would consult other reading specialists, coaches, or interventionists as well as other content area teachers.</td>
<td>Reading Teacher, Other Reading Specialists, Coaches</td>
</tr>
<tr>
<td>7</td>
<td>I would approach a colleague who has worked successfully with students at this grade level and with similar difficulties.</td>
<td>Colleague</td>
</tr>
<tr>
<td>8</td>
<td>The student, general education teacher, colleagues that work with the student. As well as, adults at home</td>
<td>Colleague, Reading Teacher, Parent</td>
</tr>
<tr>
<td>9</td>
<td>There are other reading specialists in my building - I would consult them first. <strong>I trust their judgment and know they are knowledgeable.</strong> I would refer to reliable websites. I could additionally ask colleagues at other schools who are also reliable sources.</td>
<td>Reliable Websites, Colleague, Other Reading Specialists</td>
</tr>
<tr>
<td>10</td>
<td>Another reading specialist or their teacher. I would want to know specifics about the report.</td>
<td>Reading Teacher, Other Reading Specialists</td>
</tr>
<tr>
<td>11</td>
<td>I would talk with other reading specialists in my district to see what approach they might take. <strong>They have proven to be an excellent resource for me.</strong></td>
<td>Other Reading Specialists</td>
</tr>
<tr>
<td>12</td>
<td>I would consult his/her classroom teacher, or another colleague. <strong>These people are always a good resource to start with.</strong></td>
<td>Colleague, Reading Teacher</td>
</tr>
</tbody>
</table>
I would refer to resources from the internet (best research-based practices) or refer to educational books that are available to me.

I have friends who are current or retired reading specialists and would reach out to them. I also wouldn't hesitate to contact the Reading Achievement Center at the Allegheny Intermediate Unit.

If I was unclear, I would do my own research.

I would consult the grade level ELA teacher.

District's literacy coordinator, other reading specialists, research on comprehension.

I would consult my colleagues and/or seek out information and resources from trusted reading websites.

You could consult with other reading specialists or colleagues and/or classroom teacher. The classroom teacher would know the student.

Table 4.16 provides specific responses from each of the participants regarding Question 14: If you are unclear of the approach to take, whom might you consult? Give your reasoning for consulting this person or persons.

The participants stated they would consult with various colleagues including other reading specialists, literacy coordinators, classroom reading teachers, and retired reading specialists, among others. Some specialists additionally mentioned consulting research, including reliable websites and/or educational books. Overall, the participants’ responses seem to demonstrate a strong sense collective teacher efficacy. Collective efficacy, defined as beliefs regarding the combined ability of the faculty of teachers within a given school or group to execute courses of action required to have a positive effect on students, is seen as a highly influential factor in raising student achievement (Adams &
Forsyth, 2006; Bandura, 1997; Goddard & Goddard, 2001; Goddard, Hoy & Woolfolk Hoy, 2004; Hattie, 2018).

Question 14 asked the participants to provide reasoning for their decisions about consulting other professionals, yet only three participants provided reasoning to support their conclusions. Participant 9 stated regarding other specialists in the building, *I trust their judgment and know they are knowledgeable.* Participant 11 stated that consulting other specialists in the district would be helpful since, *they have proven to be an excellent resource for me.* And, Participant 12, who decided to consult the student’s classroom teacher stated, *these people are always a good resource to start with* (see Table 4.16). Although the remaining sixteen participants did not provide their reasons for consulting others, their choices indicate that they view their colleagues and other specialists as sources of professional knowledge and expertise.

Summary of Findings

The responses of the nineteen reading specialists who were asked questions regarding the work of a struggling 7th grade student who was challenged to summarize a passage of informational text, provides with a window into their thinking. The group identified numerous areas as the “source” of the student’s challenges with the task. And, they suggested a variety of strategies they would use to increase the student’s ability to succeed. And, while it is not possible to generalize to the larger community of educators who fulfill the role of reading specialists in schools and districts, responses provided by the participants invite examination and discussion.
Chapter 5

Discussion of the Findings

The study examined the responses of nineteen reading specialists who belonged to the RSNRG in Allegheny County in Southwestern Pennsylvania. The specialists were asked to respond to a series of questions that collected demographic information and to diagnose and make suggestions regarding the work of a 7th grade student who was challenged to summarize a short piece of informational text. The study was guided by the following research question: What are the beliefs reading/literacy specialists hold regarding processes that assist struggling readers with the comprehension of informational text?

Insights on the Roles that Beliefs Play

The analyses and organization of the findings invite inference regarding a reading specialist’s beliefs about the comprehension of informational text for struggling readers. An educator’s particular set of beliefs is “at the core of reflexive and customary decisions of practice” (Schreiber & Moss, 2002). Therefore, examining the stated practices and decisions of the 19 participants in the study shed light on possible belief patterns or common themes. These themes are discussed below.

Theme One: Heavy Reliance on Basic Decoding Approaches to Reduce Cognitive Demands

Core to their “customary decisions of practice” the Reading/Literacy Specialists who participated in the study reveal a shared belief in the application of decoding approaches selected to reduce processing demands in order to help struggling readers
with the comprehension of informational text. These processes include the following approaches: repeated reading, chunking the text, explicit strategy instruction, and teacher modeling. And while reducing cognitive load is important, it only gets the struggling student part way to the target of summarizing a piece of informational text. Even when a student can decode and read all the words in a piece of text, the student must use metacognitive processes to successfully comprehend the meaning of the entire piece of text in order to summarize.

The researcher included a student summary because it provides a window into the student’s thought process. A summary requires a student to be able to both discern and analyze text structure (Vacca & Vacca, 2008). Participant 6 and Participant 12 mention the approach of discussing text structure (see Table 4.12). Among the first to create a basic set of rules for summarization were Kintsch and van Dijk (1978). The authors mention the need for the following steps to occur:

1. Include no unnecessary detail, such as trivial and repetitious information from a text passage.
2. Collapse and condense lists through the creation of key words or phrases that encompass a concept.
3. Use topic sentences from the passage or create a topic sentence. The creation of a topic sentence may be the most difficult processing demand on a maturing learner.
4. Integrate Information using the keywords, phrases, and explicit and invented topic sentences to compose a summary.
5. Polish the summary through the revision process.
Because the knowledge and regulation of knowledge demands are so high in the creation of a quality summary, this task allowed reading specialists the opportunity to diagnose a specific student’s missing skill set. The sample student was unable to self-regulate while composing a summary, due to the incorrect facts, grammatical errors, choppy flow, and absence of concise writing, among other errors. These errors present themselves as an opportunity for a specialist to create a learning trajectory with clear learning targets and success criteria for the student (Moss & Brookhart, 2012; 2015).

If students are metacognitive and strategic in both decoding a passage and encoding to compose a quality summary, the students would demonstrate the following: 1. Use of multiple strategies; 2. Analysis of the literacy task before them; 3. Reflection on what they know or don’t know about the topic to be read or written about; 4. Devising of plans for successfully completing the literacy task and for the evaluation of their process in accomplishing the task (Brown, 1978). The sample student did not employ the use of strategies as the summary does not demonstrate command of the tasks above.

Relying solely on decoding interventions differs from Duke’s (2004) recommendations that students should be taught how to activate prior knowledge, make predictions, think aloud, monitor what they read, assess their understanding, and generate questions. Both the participants and previous researchers have acknowledged the complex process of decoding and encoding to comprehend informational text. Each of the thinking approaches mentioned above may serve students well if they are motivated to learn, cognitively aware of the learning process, and engaged in explicit instruction and guided practice on how to self-select an appropriate strategy to assist the reading
comprehension process (Almasi, 2003; Guthrie et al., 2004; Moss & Brookhart, 2015, 2019; Ness, 2011; & Tarchi, 2017).

**Theme Two: Reliance on Encoding Approaches That Are More Teacher-Involved Than Student-Involved.**

Reading/Literacy Specialists who participated in the study chose the application of targeted encoding approaches to help the struggling reader in the vignette with the comprehension of informational text. These encoding approaches included both verbal and written summaries, retell, and questioning response with the inclusion of a variety of scaffolds.

The encoding approach of students answering teacher-generated questions has dominated reading comprehension instruction for decades (Durkin, 1978-1979; Ness, 2011) This is troubling because it does not equip the reader to self-analyze in a way that will lead to a life-long ability to create a quality summary; and the student will remain reliant on the direction of the teacher. One approach mentioned in the review of literature that acknowledges the complex process that occurs while reading and allows readers to demonstrate their thinking is known as Reciprocal Teaching, (Klingner & Vaughn, 1996; Oczkus, 2010; Palinscar & Brown, 1984; Rosenshine & Meister, 1994). This approach takes into account the strategies such as questioning, summarizing, clarifying, and predicting that teaches readers a specific heuristic for interacting with the text in a more meaningful, student-involved way.

Research strongly indicates that students benefit when they are engaged in learning to ask questions that help them monitor and foster comprehension before,
during, and after reading (Maloch & Beutel, 2010). These benefits are increased when teachers, and in this case, Reading Specialists, design their interventions with a clear learning target and specific success criteria that help engage students in learning to ask critical questions and monitor and improve the both the quality of the questions they ask and the effectiveness of those questions in helping them comprehend and improve their progress (Moss & Brookhart, 2012; 2015).

Theme Three: Perceived Positive Self-Efficacy for Their Individual Knowledge and Impact as Reading Specialists

It is interesting to note that only one of the participants indicated they had questions regarding their diagnosis or that they were unsure of the interventions they chose. And, while the first two themes that arose from the analysis show a heavy reliance on interventions based on the “mechanics of reading”, the participants overall felt very positive regarding their professional impact. The nineteen Reading/Literacy Specialists in the study indicated they felt confident in their ability to provide support for the student struggling to comprehend and summarize the piece of informational text. The individual participants based this confidence on their own prior experiences and previous successes. This is consistent with Bandura’s (1999) theory that the source of self-efficacy is derived from both performance accomplishments, which participants stated as previous successes, and vicarious experiences, which participants stated as prior experiences.

The research on belief formation and transformation tells us that creating and accepting new beliefs is a challenging task that Schreiber and Moss (2002) propose can only occur when a person enters “genuine doubt.” Some evidence of genuine doubt may
be present in one of the nineteen specialists’ responses. Participant 18 stated, *I do not know enough about this student to say it would support them during independent reading.* Further information would need to be gathered to measure the student's ability to use strategies independently (see Table 4.15). The participants transparency regarding a lack of knowledge about the student and missing information may allow transformation to occur. Pajares (1992) distinguished the critical difference between teacher knowledge and beliefs, noting that knowledge is absent of judgment and evaluation, whereas beliefs include knowledge based on a human perception influenced by previous experiences and schema. Furthermore, Deford (1985) explains that knowledge forms a system of attitudes and beliefs with direct behaviors and perceptions. Nespor (1987) argued that belief systems, unlike knowledge systems, do not require general or group consensus regarding the validity and appropriateness of their beliefs.

Because the beliefs of teachers relate to their classroom practices in the teaching of reading comprehension (Richardson, Anders, Tidwell, & Lloyd, 1991), it is necessary to consider the specialist’s existing set of beliefs and state of self-efficacy. Because a state of “genuine doubt” is required for transformation to occur, the implications for this study may only provide support if a specialist is expressing interest in learning a new strategy in teaching a struggling reader to comprehend informational text.

*Theme Four: Shared Belief that Reading/Literacy Specialists are Knowledgeable and Competent Professionals*

The participating Reading/Literacy Specialists indicated their confidence in the other members of their professional network of individuals. They described consulting
other colleagues and reading specialists in their own building, district, and their network for support when they were unable or less confident in diagnosing and addressing the challenges of struggling readers and selecting a specific literacy intervention. This finding underscores the trust, respect, and acknowledgement of the expertise that resides within the group. That core trust in each other is a strong foundation for continued professional growth, especially when the Reading/Literacy Specialists are engaged in common professional learning experiences like those provided by the RSNRG.

Collective teacher efficacy has been shown to be one of the most important factors in raising student achievement (Hattie, 2018). When teachers believe in each other’s ability to enact improvement and are confident that they will all be rowing in the same direction, improvements in teaching have game changing impacts. This is consistent with the idea of collective teacher efficacy, defined as beliefs regarding the combined ability of the faculty of teachers within a given school to execute courses of action required to have a positive effect on students (Adams & Forsyth, 2006; Bandura, 1997; Goddard & Goddard, 2001; Goddard, Hoy & Woolfolk Hoy, 2004, Hattie, 2018).

As the role of the reading specialist evolves, specialized literacy professionals are required to continually shift their focus between teachers, students, and the system at large. The participants in this study served primarily in the traditional role of the reading specialist that provides intervention and works with students in a small group setting. The participants felt they could consult other teachers and specialists if they were unsure. As specialists share their insight and expertise with classroom teachers and other reading specialists, they can learn from and build on existing beliefs to slowly shift thinking to allow teachers and specialist to be more effective in their teaching strategies.
Theme Five: The Mechanics of Reading Foster Reading Comprehension More than the Metacognitive Processes Students Use to Comprehend Informational Text

It is particularly interesting that none of the reading specialists mention metacognitive processes that assist struggling readers. Three participants noted the student had difficulties *processing information*. Participant 8 mentioned this difficulty when asked what problems or challenges the student was having (see Table 4.8), and Participant 9 mentioned *processing specific information* about the passage when asked what evidence would support the conclusions drawn (see Table 4.10). Participant 3 expressed confidence that marginal notes after each paragraph and chunking [the text] would help the student *process the information* slower and hopefully more in-depth (see Table 4.15). Although the idea of *processing information* was identified as an issue, the approaches mentioned vary greatly yet at their core they are all about breaking down the text into smaller chunks and then rebuilding to aid comprehension.

Eight of the participants mentioned the issue of orthographic processing, *the conventional spelling system of a language*, in the response to questions 10 and/or 11 (see Tables 4.8 & 4.10). Because the written student response was the only window into the thought process, many specialists identified spelling and writing conventions issues. This is troubling because a reading specialist should be able to not only identify mechanical errors but think of the processing needed to create a quality summary. The strategy of summarizing was specifically mentioned in five of the eight comprehension models and frameworks displayed in Table 2.2. Because this strategy is deemed essential in comprehending informational text, reading specialists could place a greater emphasis on
the process by which students use to create the summary, rather than the product of a quality written summary. This process should first be modeled and scaffolded with the criteria for success evident to the learner. As the process improves, the learning targets will shift to the eventual creation of a quality summary.

**Contributions to the Field of Educational Leadership and Further Research**

The nineteen reading specialist who participated in the study have degrees from a variety of universities and serve children in different districts and buildings in Southwestern Pennsylvania. Yet, they consistently indentified similar beliefs regarding intervention approaches for a young reader who was struggling to summarize a piece of informational text. The process of summarization requires children to discern the critical aspects in a piece of text while ignoring non essential information. This discernment process, requires self assessment and self regulation (Moss & Brookhart, 2015). Finally, summarizing a piece of text requires the student to synthesize the relevant ideas meaningfully. All of this is beyond the scope of decoding and encoding words within the piece of text the student is reading. Even if students can pronounce all of the words in a sentence, it does not guarantee comprehension. It would be like someone writing a paragraph and having a word processor run a spelling and grammar check. All of the mechanics of writing can be in place, and yet not guarantee a cogent piece of writing.

What is notable is that even though the specialists understand what it takes to summarize text, they regard the biggest hurdle to be decoding and encoding to promote comprehension. Yet, they also reported positive self-efficacy for their individual professional impact (see Table 4.15).
Consistent with Tarchi (2017), students’ cognitive (metacognition and inference-making skills) and motivational skills (reading motivation and topic interest) independently contribute to reading comprehension and should be considered when a reading specialist selects a passage and intervention approach in assisting a student with the comprehension of informational text.

**Recommendations**

This study included a small sample size of 19 participants who were all specialists who shared in the experience of participating in the RSNRG. It may be profitable to look at larger samples of unrelated reading specialists to flesh out the call for professional development for reading specialists to focus on metacognitive processes as they relate to the comprehension of informational text. Reading specialists and those in educational leadership roles may want to host conversations and work sessions regarding the various interventions in place specifically dealing with the comprehension of informational text. Reading/literacy specialists may continue to collaborate and share strategies that foster metacognitive processes that support struggling learners.

Recommendations for further research include the gathering of evidence and promotion of inquiry into current research as a form of professional learning to confirm or deny the conclusions that specialists draw and the beliefs they hold about strategies that are effective in the comprehension of informational text. One example was the mention of chunking the text, which is a close reading strategy. Casteel (1990) examined the effects of chunked text-material on reading comprehension of high and low ability readers. Casteel examined whether text-material presented in “chunks” or phrases significantly improved the reading comprehension of 50 eighth grade students composed
of 2 reading ability groups. The author found that “chunking” sentences into meaningful units of thought aids low-ability readers more than high-ability readers (Casteel, 1990). Relevant and current research would allow for specialists to confirm the effectiveness of this specific strategy.

The complex relationship between metacognition and comprehension should continue to be addressed in further research. For example, a student may struggle with processing information that would lead to an inability to comprehend. Researchers may need to further consider the processing demands needed to comprehend informational text on an independent level (Almasi, 2003). Additionally, further research can be done to focus on the effects of implementing Collaborative Strategic Reading (CSR) or Reciprocal Teaching into the comprehension of informational text with struggling readers. Finally, researchers could look closer at a comparison study of classroom teacher self-efficacy and reading specialist self-efficacy.

Implications

As reading/literacy specialists, our role is unique in that our learners have ever-changing needs and our time with students is limited. Specialists may want to consider the frameworks and strategies present in the literature review as well as the following main points:

- Conduct formal and informal assessments to allow for a deep understanding of the student’s strengths and weaknesses.
- Allow students the opportunity to self-assess their abilities in reading, writing, listening, speaking, and executive functioning skills. This affords the specialist a
window into the student’s self-efficacy, as they may evaluate themselves differently than the formal and informal assessments.

- Once the specialist has gained the data necessary to make instructional decisions, the specialist should consult additional stakeholders such as classroom teachers and parent(s) or guardian(s) to ensure that the specialist has a complete picture of the student’s background and ability.

- Student interests and ability level should be considered with purposeful and meaningful relationship building with a foundation of trust and mutual understanding.

- Student and specialist work together to create developmentally appropriate goals in student language and continue to revisit and modify goals as needed.

- If a student or group of students need additional instruction to comprehend informational text, the following things should be considered:
  - Self-Select a relevant passage that connect to the student’s interests and is on the appropriate reading level.
  - Consider the processing demands necessary to complete the task of comprehending the passage.
  - Engage students in an authentic learning experience with teacher and student questioning centered around the interest, background knowledge, and ability of the learner.
  - Consider the decoding and both verbal and written encoding demands necessary to meet the learning tasks.
Allow students opportunities to engage with the text through the use of strategy instruction which is initially teacher-led with a gradual release of responsibility. The following strategies are suggested but not limited to:

- *Predictions* made before and during reading
- *Discuss text features* that differ from genre to genre.
- Teacher and student *authentic questioning* with additional guidance on the types of questions that can be asked
- *Clarify* if a student is unsure of how to answer a question.

Additionally, monitor student’s ability to read the passage with ease. If a word or phrase is read choppy or multiple words are mispronounced, model how to clarify.

- *Summaries* can be made after each chunked piece of text. This strategy may need to be more heavily modeled, as many processing demands are needed to formulate a summary.

Continue to engage in a cycle of learning and teaching with a gradual release of responsibility from the specialist to the student.

**Limitations**

The study included a small sample size of 19 participants in mainly public schools within southwestern Pennsylvania. The specialists were all current or past members of the RSNRG. And while the sample is not generalizable to all reading specialists, the analysis of the responses accurately portrays the local context of a reading specialists’ belief regarding the comprehension of informational text. Additionally, the researcher
was a part of the RSNRG and a current reading specialist practitioner. Therefore, bias may exist due to the participation and involvement in the group as well as daily practices as a reading specialist.

Regarding the response form, the researcher would place the confidence intervals on a Likert scale to more accurately reflect a finite measure of the participant’s self-efficacy and collective teacher efficacy.

Another limitation of this study is that the participants only had one writing sample response from a non-fiction passage to draw conclusions. Only one participant explicitly mentioned the limited amount of evidence. This may have steered participants toward the language development issues of syntax and semantics. A transcribed version of a student’s oral response might better demonstrate a student’s thinking process and allow for further analysis.

**Implications for Personal Leadership Agenda and Growth**

Through the researcher’s evolution of learning and growth, there are key lessons that have emerged from this experience. First, it is evident the belief systems of reading specialists are complex, deeply rooted, and can only change when cognitive dissonance occurs. Second, the intervention practices utilized by specialists when assisting struggling readers with the comprehension of informational text require a stronger analysis and specific plan.

The complex belief systems currently held by the reading specialists who participated may act as a barrier to providing more effective interventions to struggling readers. These kinds of entrenched beliefs are not easily understood, nor transformed. It will take
more study with larger sample sizes to understand the factors that are involved in the complex process of intervening with students who struggle to comprehend informational text.
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APPENDIX A

Response Form for Participants

Part I: Demographic Information

1. What is your job title?
   - ☐ Reading Specialist
   - ☐ Literacy Coach
   - ☐ Other _________________________

2. What grade levels do you currently teach? Check all that apply.

<table>
<thead>
<tr>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Pre-K</td>
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<tr>
<td>☐ K</td>
</tr>
<tr>
<td>☐ 1</td>
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<tr>
<td>☐ 2</td>
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<td>☐ 3</td>
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<td>☐ 11</td>
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<tr>
<td>☐ 12</td>
</tr>
</tbody>
</table>

3. How many years have you held your reading specialist certificate/degree?
   - ☐ 1-5
   - ☐ 6-10
   - ☐ 11-20
   - ☐ 21-29
   - ☐ 30+

4. How many years have you held a reading specialist position?
   - ☐ 1-5
   - ☐ 6-10
   - ☐ 11-20
   - ☐ 21-29
   - ☐ 30+

5. How many years have you held a professional teaching position?
   - ☐ 1-5
   - ☐ 6-10
   - ☐ 11-20
   - ☐ 21-29
   - ☐ 30+

6. Which degrees/certifications have you earned or are currently working towards?

<table>
<thead>
<tr>
<th>Area of Certification</th>
<th>Degree</th>
<th>Year Obtained/Expected Date of Completion</th>
</tr>
</thead>
</table>

136
<table>
<thead>
<tr>
<th>Setting</th>
<th>Education Level</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Childhood</td>
<td>B.A./B.S.</td>
<td>B.A./B.S.</td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td>M.S./M.Ed.</td>
<td>M.S./M.Ed.</td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>Other</td>
<td>Other</td>
</tr>
<tr>
<td>Elementary</td>
<td>B.A./B.S.</td>
<td>B.A./B.S.</td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td>M.S./M.Ed.</td>
<td>M.S./M.Ed.</td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>Other</td>
<td>Other</td>
</tr>
<tr>
<td>Secondary</td>
<td>B.A./B.S.</td>
<td>B.A./B.S.</td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td>M.S./M.Ed.</td>
<td>M.S./M.Ed.</td>
<td>Other</td>
</tr>
<tr>
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<td>Other</td>
<td>Other</td>
<td>Other</td>
</tr>
<tr>
<td>Reading Specialist</td>
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<td>B.A./B.S.</td>
<td>Other</td>
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<tr>
<td></td>
<td>M.S./M.Ed.</td>
<td>M.S./M.Ed.</td>
<td>Other</td>
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<tr>
<td>Other</td>
<td></td>
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</tr>
</tbody>
</table>

7. Which of the settings do you currently serve?
   - Public school
   - Private school
   - Charter school
   - Other ________________

8. Within a given week, estimate about how much of your time (by percentage) is spent working with the following groups of people within your school:

   Percentage of time:
   - ________ Students
   - ________ Teachers
   - ________ Administrators
   - ________ Parents
   - ________ Other ____________

9. In regard to your personal reading, please place a check in the box next to your favorite genre.
   - fiction
   - non-fiction/ informational
   - historical fiction
   - science fiction
   - mystery

Part II: Perceptions about Teaching Informational Text

Directions: Please respond to the questions that follow about a student who is struggling to comprehend the piece of informational text below. The 7th grade struggling reader was
asked to summarize the non-fiction passage. Read the passage, and then analyze the student’s responses.

\[ \textbf{Megalodon: The Massive Prehistoric Shark} \]

What creature has teeth longer than 7 inches and a body more massive than a T-Rex? It is a creature that went extinct more than 3.5 million years ago. This creature was the Megalodon Shark. It is the most infamous of all the sharks. It could eat Jaws in one bite! This shark was the best predator of his time.

So how big did the Megalodon get? Some of Megalodon’s teeth that have been found are over 7 inches long. Most other fossil teeth are between 3 and 5 inches. It is hard to say how big the Megalodon could get because we only have teeth fossils. Some people long ago felt the Megalodon was over 100 feet long. However, more recently, the average length of the shark was estimated around 33 feet. This shark probably weighed around 65 tons. What an impressive animal!

What did an animal this large eat? Scientists suggest that this shark ate whales for breakfast! The Megalodon shark teeth fossils are almost always found around whale bone fossils. Whale fossils sometimes have bite marks from shark teeth.

The Megalodon shark had a strong jaw. Powerful jaws can be measured in bite force. Bite force is the amount of pressure with which the jaws can crunch down. Megalodon had a bite force of 41,000 lbs. That is the largest bite force of any animal EVER! T-Rex had a bite force of 13,000 lbs. If the Megalodon sharks were alive today, they would be powerful enough to bite an elephant in half!

Adapted from: www.fossilguy.com/Megalodon: Facts and Information
This is the student’s summary of the passage:

PLOT: The plot is telling details and history of the megalodon a non extistant shark. It has 7 in. teeth. People think it was 100 feet but it was 33 ft. average. Bigger than T-Rex! Ate whales and was an underwater creature. Elephants would bite it in half.

1. What problems/challenges are the student having?

____________________________________________________________
____________________________________________________________
____________________________________________________________

2. What evidence would you use to support this decision?

____________________________________________________________
____________________________________________________________
____________________________________________________________
____________________________________________________________

3. What would be your approach to helping this student comprehend this piece of informational text and why?

____________________________________________________________
____________________________________________________________
____________________________________________________________
____________________________________________________________
____________________________________________________________

4. How confident are you that this approach will be effective in helping this reader better approach and comprehend informational text? Provide your reasoning to support your level of confidence.

____________________________________________________________
____________________________________________________________
____________________________________________________________
____________________________________________________________

5. If you are unclear of the approach to take, whom might you consult? Give your reasoning for consulting this person or persons.

____________________________________________________________
____________________________________________________________
____________________________________________________________
____________________________________________________________
____________________________________________________________
Recruiter Approval Form

Mon 3/11/2019 8:48 AM
Good morning, Marguerite,

We have 46 registered this year (including you). Last year, there were 38 registered, but 16 of last year’s participants are also registered this year, leaving 22 from last year who are not “continuers” to this year, for a total of 68 people between the two years.

If it matters, one of last year’s participants was an administrator who attended alongside her reading specialists, but she is not a reading specialist herself.

If you need official permission to list me as a recruiter, consider this my approval. Please let me know if I can do anything else for you. Have a great Monday!

- Heather

Heather M. Moschetta, Ph.D.
Curriculum and Instruction Coordinator
Instructional Coach Mentor, PA Institute for Instructional Coaching

Reading Achievement Center
Teaching and Learning Division

Educational Opportunities • Innovative Solutions • Leadership Excellence
APPENDIX C

The recruitment email

Dear Member of the Reading Specialist Network Role-Alike Group,
I am sending this invitation to participate in a research study on behalf of Marguerite Haldin, a doctoral candidate in the Ed.D. in Educational Leadership program at Duquesne University. The focus of her research is to understand how literacy/reading specialists approach working with students who are challenged by reading informational text.

You are invited to participate in an online survey that will ask for a response to a vignette involving a reader who is experiencing challenges with a piece of informational text. The platform used for the survey--SURVEY MONKEY--ensures that your responses will be completely anonymous.

As stated in the informed consent statement that is located at the beginning of the response form located on SurveyMonkey, you are under no obligation to participate in this study and are free to withdraw consent to participate. You may refuse to participate or refuse to complete and share your response at any time prior to submitting your completed response form. Neither I, nor Mrs. Haldin, will know who participated and who did not, nor will your name, email, or IP address be connected to your response.

The response form collects some general demographic information along with asking you to respond to the reading vignette. It will take you approximately 20 minutes to complete.

To volunteer for this study, simply follow this link, XXXXXXXXX.

If you have any questions related to the research or the response form, please contact XXXXXXXX.

Kindly complete the response form by DAY, May XX, 2019. Your input in this initiative is extremely valuable. Thank you in advance for helping to increase our understanding of the valuable work that reading/literacy specialists perform each day.

Sincerely,

Heather Moschetta
APPENDIX D

DUQUESNE UNIVERSITY
PITTSBURGH, PENNSYLVANIA

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

TITLE:
The Beliefs Literacy Specialists Hold Regarding Processes that Assist Struggling Readings with the Comprehension of Informational Text

INVESTIGATOR:
Mrs. Marguerite Haldin, M.Ed., Doctoral Candidate, Department of Foundations and Leadership, Duquesne University

ADVISOR:
Dr. Connie M. Moss, Ed.D., Director, Ed.D. in Educational Leadership, Department of Foundations and Leadership, Duquesne University

SOURCE OF SUPPORT:
This study is being performed as partial fulfillment of the requirements for the doctoral degree in Department of Foundations and Leadership at Duquesne University.

STUDY OVERVIEW:
The purpose of this research is to explore the work of the reading specialist through the response form which includes a vignette and written summary of a reader who is struggling with a piece of informational text.

PURPOSE:
You are being asked to participate in a research project that seeks to gain insight into the beliefs reading specialists (or those in similar roles) hold regarding processes that assist struggling reading with the comprehension of informational text. It is our hope that information from this survey will contribute to a better understanding of the ways we can better assist reading/literacy specialists assist struggling readings with the comprehension of informational text.

In order to qualify for participation, you must be:
- A Reading/Literacy Specialist or person in a similar role
- A member of the Reading Specialist Role-Al-like Network for either the 2017-2018 or 2018-2019 school year or both.
• 18 Years of age or older

PARTICIPANT PROCEDURES:

If you provide your consent to participate, you will be asked to complete an online response form that includes questions about demographic information as well as open-ended questions about your beliefs, opinions, and practices as a reading/literacy specialist. You will only have to complete the response form once, and will have roughly two weeks to complete it. The response form should take roughly 15-25 minutes to complete.

These are the only requests that will be made of you.

RISKS AND BENEFITS:

There are minimal risks associated with participating in this study, but no greater than those encountered in everyday life.

COMPENSATION:

There will be no compensation for participating in this study. Participation in this project will require no monetary cost to you.

CONFIDENTIALITY:

Your participation in this study and any personal information that you provide will be kept confidential at all times and to every extent possible. Your name will never appear on any response form or research instrument. All written and electronic forms and study materials will be kept secure.

Your response(s) will only appear in statistical data summaries. Any study materials with personal identifying information will be maintained for three years after the completion of the research and then destroyed.

Your completed response form will be received by the investigator without identifying data using Survey Monkey anonymous response format. Under this format responses are stripped of first name, last name, email address, and IP address so that all submissions are completely anonymous.

RIGHT TO WITHDRAW:

You are under no obligation to participate in this study. You are free to withdraw your consent to participate at any time prior to completing the response form. Since the completed response forms are received without identifying information it is not possible to retrieve your responses once they are submitted.
SUMMARY OF RESULTS:

A summary of the results of this study will be provided to at no cost. You may request this summary by contacting the researchers and requesting it. The information provided to you will not be your individual responses, but rather a summary of what was discovered during the research project as a whole.

FUTURE USE OF DATA:

Any information collected that can identify you will not be used for future research studies, nor will it be provided to other researchers.

VOLUNTARY CONSENT:

I have read this informed consent form and understand what is being requested of me. I also understand that my participation is voluntary and that I am free to withdraw at any time, for any reason without any consequences. Based on this, I certify I am willing to participate in this research project.

I understand that if I have any questions about my participation in this study, I may contact Dr. Connie Moss, Dissertation Advisor at 412.396.4038. If I have any questions regarding my rights and protections as a subject in this study, I can contact Dr. David Delmonico, Chair of the Duquesne University Institutional Review Board for the Protection of Human Subjects at 412.396.1886 or at irb@duq.edu.

This project has been approved/verified by Duquesne University’s Institutional Review Board.

Proceeding to the next page indicates your voluntary consent to participate in this project.
March 25, 2019

Dr. Connie M. Moss, Dissertation Chair
600 Forbes Avenue
Duquesne University
Pittsburgh, PA 15282
Re: Marguerite Haldin Dissertation

Dear Dr. Moss,

I, Jayson Kowinsky, give permission to Marguerite Haldin, doctoral candidate in the Ed.D. in Educational Leadership program at Duquesne University to use the article I authored entitled, *Megalodon: Facts and Information* that can be found at:

https://www.fossilguy.com/gallery/vert/fish-shark/carcharocles/carcharocles.htm and was adapted by Dr. Bernadette Nemeth into a short piece of informational text attached to this permission. I grant permission for this adapted version, titled, *Megalodon: The Massive Prehistoric Shark*, to be used on a response form that will be distributed as part of Ms. Haldin’s data collection instrument. I understand that the data gathered from the response form that will include my adapted article will be used in her dissertation. I also grant permission for this adapted article to be published in the final dissertation document.

Signed: [Signature]

Jayson Kowinsky,

[Website]

www.fossilguy.com
Megalodon: The Massive Prehistoric Shark
Used with author’s permission

What creature has teeth longer than 7 inches and a body more massive than a T-Rex? It is a creature that went extinct more than 3.5 million years ago. This creature was the Megalodon Shark. It is the most infamous of all the sharks. It could eat jaws in one bite! This shark was the best predator of his time.

So how big did the Megalodon get? Some of Megalodon’s teeth that have been found are over 7 inches long. Most other fossil teeth are between 3 and 5 inches. It is hard to say how big the Megalodon could get because we only have tooth fossils. Some people long ago felt the Megalodon was over 100 feet long. However, more recently, the average length of the shark is estimated around 33 feet. This shark probably weighed around 65 tons. What an impressive animal!

What did an animal this large eat? Scientists suggest that this shark ate whales for breakfast! The Megalodon shark teeth fossils are almost always found around whale bone fossils. Whale fossils sometimes have bite marks from shark teeth.

The Megalodon shark had a strong jaw. Powerful jaws can be measured in bite force. Bite force is the amount of pressure with which the jaws can crunch down. Megalodon had a bite force of 41,000 lbs. That is the largest bite force of any animal! EVER! T-Rex had a bite force of 13,000 lbs. If the Megalodon sharks were alive today, they would be powerful enough to bite an elephant in half!