

Scaffolding Reading Comprehension to Deepen Understanding of Text

by

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## **Abstract**

Students are required to process large amounts of text, and they must be prepared to understand and evaluate text to gain meaning about the world around them. Reading comprehension is an essential component of the reading process, and the empirical research surrounding the topic of comprehension suggests that there is a need to examine reading comprehension pedagogy. Whereas research supports the need to examine the ways in which students process text, there is debate about how well our teachers are scaffolding comprehension skills and strategies. The literature surrounding the topic of scaffolding reading comprehension encourages teachers to access a wide repertoire of strategies and skills to differentiate reading comprehension instruction and then assess the learning of individuals. Another topic that is widely researched is the relationship between reading processes, with specific focus on how vocabulary development, reading fluency, word decoding, and language comprehension affect the understanding of text. When children begin their educational journey, teachers often focus on word decoding, and reading fluency. In this literature review, I will review the research to determine the value of facilitating reading comprehension instruction in early years education, to examine the most effective strategies to support deep learning of text and to discuss the implications of scaffolding reading comprehension strategies. I will also examine the impact of formative assessment techniques designed to promote growth in comprehension.

*Keywords:* reading comprehension, scaffolding, differentiation, content-based reading, peer tutoring, assessment of reading comprehension, teacher expertise, reading strategies.

## **Introduction**

The importance of building foundational literacy skills for children cannot be overstated. Children develop attitudes about literacy from a very early age, and the classroom becomes a story-telling place in which students learn about the world around them. As children move from early-years literacy instruction to upper elementary, the emphasis on literacy skills will be refined and adapted as students develop voice in writing, and they focus on meaningful reading. In every classroom strong literacy instruction remains the cornerstone of all learning. Students require expert literacy instruction to develop and foster skill growth, in reading, writing, and vocabulary development. Literacy has primarily been associated with Language Arts in the Program of Studies, but it does permeate through all areas of the curriculum from early years through to graduation. Being literate in today's schools involves more than just reading, and writing; students today must be able to read to understand complex text, about a variety of subjects to interpret a diverse world around them. Teachers are continuously changing practice to improve literacy instruction, but it is challenging to accommodate the needs of diverse learners who require very different sets of skills. Educators have become more adept at scaffolding instruction based on assessment criteria; however, research suggests that there is still much work to be done to create instructional pathways that nurture and develop literacy in classrooms. Reading, writing, and vocabulary development are the essential components of literacy, and the facilitation of strategies and skills taught to students must be effectively scaffolded so that each child understands and embeds these skills into literacy learning.

Children come to school with a diverse set of literacy skills. Some have been immersed in reading and have already grown to love literature while others have had little exposure to books. Recognizing that each child comes to school with a different set of skills is imperative for

effective literacy instruction. An expert teacher can differentiate skills and strategies based on starting points for students. As children develop literacy skills, they recognize the value of seeing reading and writing as connected and interdependent. Efficient teachers recognize and evaluate the needs of students by analyzing reading and writing strengths and weaknesses. Our most effective teachers are experts in finding ways to challenge and develop confidence in learners so that they want to build literacy skills. Teachers who are most willing to analyze the needs of literacy learners will also scaffold reading and writing instruction by responding with specific, targeted intervention.

While I recognize that literacy involves the processes of reading, writing, and vocabulary development in all subject areas, this topic is much too broad for the focus of this literature review. The focus of this review must be more succinct with a focus specifically on reading comprehension. Becoming a successful reader involves a series of interconnected processes including letter naming and sounding out, finding flow in reading words, and understanding text. In reading instruction, the processes of letter naming and sounding out include phonemic awareness, and phonics; finding flow in reading is known as fluency. Although these processes are necessary to become a successful reader, understanding text is perhaps the most complicated process to teach because it is difficult to facilitate instruction to deepen meaning. The components of reading instruction do not happen independently but rather connect and develop simultaneously. Reading comprehension is not a linear process and therefore it is more difficult to facilitate comprehension instruction, and it is also more complex to assess. Students who are reading must have been taught explicit strategies to monitor comprehension, make connections, access background knowledge, and make inferences about the text.

Children must be explicitly taught to be thinking while reading. This is an invaluable skill but thinking varies depending on previous background experiences and how students connect to text. This review examines and critiques the factors that influence reading comprehension growth, including explicit instruction and strategies that focus on developing and supporting comprehension. I review studies that investigate effective ways to improve reading comprehension instruction through scaffolded support and the most significant formative assessment techniques designed to show growth in reading comprehension. In an era that has demanded changes in how teachers prepare learners for an unknown future, research suggests that many teachers are still teaching reading comprehension in a traditional format that is primarily highlighted by teacher-question-student-answer response types of instructional strategies. Reading comprehension does not happen only after reading; it is the thinking that must occur before, during, and after reading. There has been a misconception amongst teachers about comprehension, in that teachers have considered comprehension to be only the retelling of the story and answering questions. Reading comprehension is a complex process that involves active processing and deep thinking. This paper will review the instruction, assessment, and differentiation of strategies within reading comprehension pedagogy.

This complexity of reading comprehension instruction is my focus, as supported by the empirical literature surrounding the topic. This intricate set of strategies and skills in reading comprehension do not develop linearly; gaining meaning from text requires active processing of information before, during, and after reading, and comprehension does not occur simply because students understand how to decode and read words fluently. Reading requires creating meaning from text by connecting to information that is already known, making inferences about what the story is trying to say, and remembering important details to make interpretations about new

learning from the text. Educators and researchers recognize that every student learns to read with understanding in a different way and therefore many studies refer to the importance of differentiated reading instruction. Differentiated instruction in reading may include strategies such as cluster grouping, curriculum compacting, use of technology, and differentiated texts based on interest, and ability.

As I look closely at the studies related to reading comprehension, there is much discussion surrounding the connection between engagement in reading and reading comprehension. Students who enjoy the books they are reading will naturally work hard to understand the text and studies allude to the fact that when teachers are differentiating books to accommodate different levels of reading, they should also be cognizant of student interest; In analyzing the factors that promote significant reading comprehension growth, it is important to review the connection between a decline in student interest and engagement in reading and standardized reading assessments (Shaunnessy-Dedrick, Evans, Ferron, & Lindo, 2015). This literature review compares the research related to standardized reading assessments versus individualized, formative assessments. This paper discusses the literature on scaffolded learning strategies designed to accommodate students who are reading at different levels. Researchers question and evaluate teaching practices and the validity of whole-class teaching when our students all need different strategy support and differentiation in learning to read. Assessing reading development, while students are reading, is imperative to support comprehension growth and this literature study provides a comprehensive review of the best assessment practices to help students understand how to read with deep understanding. I begin by grounding this study in my personal interest; This study reviews differentiated reading comprehension strategies, how teachers can best implement these strategies in elementary classrooms by being responsive to the

needs of students, and how teachers can use formative assessment to know that students are reading with deep understanding.

### **Personal Interest**

I have been an elementary school teacher for twenty-five years and have always been passionate about the reading development of children. Having worked at the provincial level on the development of comprehensive literacy practices, I have engaged in reflective conversations with literacy experts who are concerned about how literacy is being taught in classrooms. Struggling readers are prevalent in every school community and school divisions recognize the need to facilitate reading instruction differently to ensure that each student leaves school with tools to support reading fluency and comprehension of nonfiction and fiction text. My interest in this literature review stems from my personal reflections about how we can teach reading effectively to a diverse group of learners. Assessment data supports the need to adapt programming and to be responsive to the needs of students with different learning profiles. The studies in this literature review discuss potential shifts in pedagogy and the facilitation of reading comprehension instruction necessary to increase literacy growth.

My experience in teaching reading comprehension counters the reading instruction I received as a child. My teachers taught reading with a strong emphasis on phonics and reading fluency. Reading comprehension was thought to come after reading and was purely based on question-answer responses. Most questions were literal and could be found easily within the text. Whereas teachers grouped students differentiated by ability (low and high), there were never any strategy lessons, or explicit instructions to become better at understanding text. I was a strong early reader and was able to decode efficiently, but I did not learn to self-monitor for comprehension until I was much older. My interest in reading instruction, particularly the

emphasis on reading comprehension, comes from many years of reflection about gaps in students' understanding while reading text.

The knowledge and expertise that is required of teachers to teach reading with accuracy, fluency, and understanding does not develop only through coursework at the university level. Teachers who can explicitly scaffold reading instruction are able to design specifically-developed assessments to find out the achievement gaps of each learner and then create lessons that incorporate strategies to build on a learner's strengths and areas of growth. Scaffolding reading instruction involves a variety of methods that support readers in gaining skills to develop stronger reading comprehension. As part of a team-teaching environment, my teaching partner and I were able to scaffold instruction by assessing the reading fluency and comprehension of each learner and then developing programming to ensure growth for each student. In the research I have reviewed, one of the themes that pervades the studies is how teachers can use explicit strategy instruction to lead to deeper understanding of text. Many of the studies reassure my pedagogical approach to teaching reading by analyzing the importance of expert teaching in the development of reading comprehension.

My interest and motivation to study reading comprehension comes from a beginning in early education. I was a kindergarten teacher for six years and during this time I developed a passion for facilitating literacy through play, in a classroom that differentiated learning to meet the needs of all students. Our early learners come to a formalized school setting with very diverse skills and the importance of using formative assessment techniques to evaluate early listening comprehension and oral comprehension skills is invaluable in identifying early reading difficulties. I am very passionate about raising awareness in our educational communities to develop programming that is differentiated, or specifically designed, for all students so that we



can increase reading fluency and comprehension from a very early age and develop readers who love to read. The specific research questions in this literature review relate to my personal experiences with differentiation of reading approaches for all students and the studies very clearly discuss the ways in which differentiation affect growth in reading comprehension.

### **Background**

According to the reviewed literature, reading comprehension is a complex, nonlinear component of reading acquisition. While students learn to decode in early years' classrooms, research has identified the need to facilitate simultaneous instruction of decoding, fluency, and comprehension. The empirical research studied in this literature review suggests that while reading comprehension is complex, teachers can effectively develop pedagogy to build comprehension skills using efficient scaffolding strategies and a differentiated approach to teaching reading based on students' abilities. Teachers who are striving to deepen students' understanding of text must be cognizant of which strategies are most effective, how to accommodate the differing reading abilities of students, and how to monitor progress using formative assessment. The research strongly supports the use of explicit strategy instruction, differentiated reading approaches, and formative assessment to deepen understanding of text.

**Explicit strategy instruction.** Cognitive-based views of reading comprehension emphasize the importance of using both metacognitive and cognitive strategies that expedite text comprehension to categorize struggling and strong readers. Reading strategies serve to develop reading comprehension, but not all students use reading strategies effectively, especially when they are reading challenging text. The empirical research reveals that even when children do not use comprehension strategies effectively, explicit reading strategy instruction is a valuable approach for teaching students to learn and apply strategies to reading. To help students acquire

stronger comprehension skills, it is imperative for teachers to embed strategy instruction into daily reading pedagogy. Interestingly, in reading the empirical research surrounding reading comprehension, van Rijk, Volman, de Haan, & van Oers (2017) suggest that a Vygotskian learning environment that focuses on maximizing meaning from text for students improves reading comprehension of nonfiction texts. A teacher must have a wide variety of texts available for students to read; accessing appropriate strategies which focus on cognition and metacognition is essential for teaching reading comprehension strategy instruction. The empirical research discusses models of reading instruction that are heavily influenced by language comprehension; Vocabulary skills, logical interpretations, making inferences, comprehension surveys, and analysis of text, which are all higher-level thinking skills. Explicit strategy instruction that targets language skills is important in developing reading comprehension and in the research conducted by Pratt & Logan (2014); they find that there is a direct correlation between the amount of time teachers focused on explicit language comprehension instruction and the reading comprehension growth throughout a school year. These findings strongly connect to the research question in my literature review that asks about the significance of explicit strategy instruction and the resulting growth in reading comprehension.

**Differentiated reading approach:** The goal of every classroom teacher is to help build student capacity to read and understand different types of text. Researchers have closely examined the developmental and proficiency levels of readers at different ages and while teachers must follow a specific Program of Studies for Language Arts for each grade level, there are students in every classroom who are not able to read grade-level text, or who are well beyond the grade-level expectations for reading fluency and comprehension. Students move through different stages of reading acquisition. Reading instruction typically begins with a focus on word

attack skills, decoding, and fluency, to a stage predominantly focused on comprehension of content-specific texts. It is impossible for students to move through this continuum without specific, targeted instruction to support each stage. What is most important when facilitating reading comprehension instruction is for teachers to recognize that each student has a different set of skills to bring to reading instruction and therefore instruction must be differentiated so that each learner is able to move through each stage of reading acquisition successfully. It is important to recognize the need for differentiation, as findings suggest that there is a “gap between performance and the designated levels of the staircase of text complexity” (Mesmer, & Hiebert, 2015, p. 492) and if we are facilitating learning experiences based on pre-designed texts with hierarchical complexity, we must be sure that students are developmentally ready to read and understand those texts. Reading proficiency in fluency and comprehension is connected to skill as well as motivation to read. Proficiency is also connected to an explicit instructional approach to teaching reading, which supports differentiated learning. The ways in which teachers adapt content, practice, and evidence-based work samples become the foundation of differentiated reading instruction. While a layered approach to teaching reading has been widely-supported for struggling readers, there is empirical research that confirms the need for classroom adaptations in instruction for advanced learners as well. The discussion about whether the differentiation of reading approaches for all learners actuates growth in reading comprehension is examined in the empirical research I review below.

**Formative assessment of reading comprehension.** For a teacher to effectively develop programming that is differentiated for developmentally appropriate reading acquisition, there must be adequate formative assessment to support the needs of the learner. Researchers have suggested considerations to guide literacy planning and implementation to emphasize the use of

formative assessment evidence to demonstrate proficiency. This data allows teachers to make applicable curricular modifications related to performance criteria. Based on specific and targeted learning objectives for reading comprehension, teachers can modify the text by looking at the complexity, the length, the specific content, and the vocabulary within. In the empirical research I have reviewed, differentiation has been considered as an effective schoolwide approach for lessening gaps in achievement. What is most significant in these findings is the need to assess the strengths and weaknesses of each reader to find out specifically what the achievement gaps are, and how to adapt instruction to help build those skills that are lacking. There is much research to support the notion that early reading assessments rely heavily on word identification skills, and therefore do not adequately identify problems that generally occur when text becomes more complex (Cain, Oakhill & Bryant, & O, 2004; Spencer, Goldstein, Sherman, Noe, Tabbah, Ziolkowski, & Schneider, 2013; Verhoeven & Van Leeuwe, 2008). This is a topic of consideration, in that a negligence to recognize the importance of reading comprehension in early reading assessments may contribute to a delay in intervention until a time in which teachers are assessing how students read to learn, instead of how they are learning to read. My research question in this literature review provides focus for the need to formatively assess reading comprehension to more accurately identify early reading difficulties.

There also is evidence to support the need for a reader to reflect on the information stated explicitly stated in the text and then create a coherent mental image of it. Formative assessment in reading comprehension must provide teachers with information about how the reader is able to integrate information throughout a specific text while accessing background knowledge. Because reading comprehension is not a linear process, in that it occurs through a set of simultaneous, but not always alike, metacognitive strategies, formative assessment measures must be dynamic and

specific to targeted behaviours and how students create coherent mental representations of what they are reading in a text. The RAND Reading Study Group (2002) has provided guidelines for developing comprehension benchmarks that include the need for reliable and valid comprehension tests that are influenced by reading theory and are responsive to the developmental milestones of reading development. In the literature review presented here, I specifically consider studies in which the authors discuss formative assessment techniques that help to identify students who have reading comprehension difficulties. Assessment of reading difficulties, particularly in reading comprehension, becomes increasingly pertinent as we think about the difficulties students will have outside the classroom if they are unable to understand text in different contexts. Reading comprehension difficulties are pervasive, in that they extend beyond a language arts classroom into every area of the working world.

### **Research Questions**

The purpose of the first part of this study is to review the empirical literature on scaffolding reading comprehension to deepen understanding in literacy. Specifically, as suggested in the preceding sketch of the research background, the following questions summarize the review. Three main topics emerged through this review of 25 different empirical research articles. These topics and questions emanated from a thorough examination of reading comprehension research studies in elementary school children.

TOPIC: Scaffolding reading comprehension for deeper understanding

1. Does explicit strategy instruction by expert teachers lead to deeper understanding of text than a generalized approach to teaching reading?
2. Does a differentiated reading approach affect growth in reading comprehension?

3. Does formative assessment more accurately identify early reading difficulties than summative, standardized testing?

### **Definitions**

To fully understand the process of scaffolding reading comprehension to deepen understanding, it is important to define the terms that will be used in this literature review. These terms include *reading comprehension, scaffolding, differentiation, content-based reading, peer tutoring, assessment of reading comprehension, teacher expertise, and reading strategies.*

*Reading comprehension* is an essential component in the process of reading acquisition. The components of reading comprehension include specific and targeted vocabulary instruction, cognitive and metacognitive strategy instruction, and responsive engagement. Reading comprehension involves simultaneously extracting and constructing meaning through interaction and involvement with written language. Teaching reading comprehension is complex, in that it involves a variety of practices “designed to equip students with the ability to organize and analyze knowledge; link it to information; reflect upon it; and take action” (Fisher, Frey, & Hattie, 2016, p. 56).

*Scaffolding* refers to instructional techniques that move students progressively toward stronger understanding and more independence in the reading process. Scaffolding is successive levels of support that help students to develop skills and a deeper understanding of text. As students become more independent in their use of specific scaffolding strategies, the supports are removed to encourage a gradual release of responsibility from teacher to student. Scaffolding is an effective way to lessen gaps in achievement. For example, if students are not at the reading level required to understand a text, the teacher might use instructional scaffolding until they can read the required text independently and without assistance. Teachers can scaffold complex

reading comprehension instruction in small groups of learners but in defining scaffolding, it is important to look at both the teacher's and the student's role in the process. The facilitation of scaffolding must be created to determine what the teacher is doing is related to changes in what the student is able to do.

*Differentiation* refers to a variety of teaching techniques and lesson adaptations to instruct a group of students with diverse learning needs in the same classroom. When teachers differentiate instruction, they might give students different reading passages designed to match their reading ability to accommodate reading development that supports struggling readers, as well as students who need enrichment in reading. There are gaps in reading achievement in all classrooms and this disparity requires teachers to differentiate instruction and provide reading content that is above, at, and below grade level to guarantee that all students are concurrently challenged and motivated to read. Some examples of differentiation may include flexible grouping for instruction, cluster grouping (based on reading ability), and curriculum compacting (shrinking the curriculum for advanced readers).

*Content-based reading* is the ability to read and understand text in subjects such as science, social studies and mathematics. It includes the use of informational text in written and electronic form. Each curriculum subject has specific reading obligations and different strategies need to be taught and assessed. Students need to be taught how to read and understand texts of different disciplines. Without precise subject-specific instruction, students may have difficulty understanding text in content areas. Content-based reading requires students to access prior background knowledge to help make sense of the text. The goal of content-based reading is to construct knowledge; reading strategies specifically designed for content-based reading help students understand text and assimilate information into a coherent representation.

*Peer tutoring* is a flexible, student-led strategy that involves students learning in the role of both tutor and tutee. Peer tutoring is an effective scaffolding technique that “supports children’s learning by structuring the task’s level of difficulty, jointly participating in problem solving, focusing the learner’s attention to the task, and motivating the learner” (Rodgers, 2004/2005, p. 504). Successful peer tutors can provide adequate support for students who need extra support.

*Assessment of reading comprehension* involves the ways in which a teacher evaluates a student’s understanding of text. Formative assessment measures occur before and during instruction, while summative assessment happens only after a unit of study.

*Teacher expertise* is evident when a teacher facilitates learning in many ways to accommodate the learning styles of different students and knows how to choose and apply what is best practice, from both pedagogical reflection and professional learning. A teacher who can explicitly facilitate instruction using the processes of scaffolding and differentiation while simultaneously assessing the reading development of each student is considered an expert teacher. Expert teachers provide quality learning experiences for diverse groups of students and they can assess the needs of learners as they are teaching. A challenge in reading comprehension research is to increase the efficacy of instruction by recognizing and evaluating the instructional strategies that best assist in developing reading comprehension.

*Reading strategies* are utilized by students to develop purpose in their reading; these reading strategies may include summarization, activating background knowledge, retelling through dialogue, Socratic seminars, and vocabulary instruction. Reading strategies help students adjust their reading, depending on the task and the type of text. Strategic readers use different strategies and skills to construct meaning from text. Evidence supports the use of strategies to



improve comprehension. Strategies are often implemented in small groups where the teacher models the strategy using expository text. Teachers and students then engage in a shared discussion about a small portion of text that demonstrates the use of a specific strategy. Initially, a teacher will model a specific strategy and will gradually release the responsibility to the student group. Strategies provide students with concrete ideas to deepen understanding.

### **Research Pathway**

This process has evolved from a broad overview of comprehensive literacy to the very specific review of how we can scaffold reading comprehension to improve understanding. My research has been guided with the use of specific terms including: “differentiated reading comprehension” and “scaffolding reading comprehension.” My literature review journal articles have primarily come from the University of Victoria Library search engine; however, my exploration was also enhanced through the Web of Science and sources in the education field who predominantly study literacy. I filtered my searches to include peer-reviewed, scholarly journal articles from 2012 - 2017 but the searches were somewhat limited and narrowly focused. I then expanded my search to go back as far as 2004 and found the results were more promising and the articles were filled with pertinent information about reading comprehension. I found 30 articles, and then read them thoroughly to determine those that were most informative and empirical. I narrowed my reference list to 25 articles that delve into the topic of scaffolding reading comprehension in elementary school. Each article offers an evidence-based perspective, strategy, or assessment technique, to support the importance of facilitating reading comprehension in different ways to meet the learning needs of all students.

Once I read and recorded notes pertaining to each of the 25 studies, I transferred the findings of the study into an analysis chart. The chart allowed me to process topics and themes

found in the findings of each study. The chart evolved into a summary of each finding and I was able to find common threads that I could link together to make sense of the findings. From this analysis chart, I was able to determine the three most prominent themes from the literature and I chose questions based on what researchers studied on the topic of scaffolding reading comprehension. This analysis chart will be the cornerstone of my literature review and it will allow me to question, reflect, and critically analyze the literature.

In the subsequent sections of this literature review, I will review evidence-based research to explore the different ways in which reading comprehension can be scaffolded and differentiated to deepen understanding. I will examine the correlation between explicit strategy instruction and expertise in teaching with the assessment findings related to reading comprehension. I will also analyze reading comprehension strategies to make judgements about which are most relevant and meaningful. My intention in this review is to examine the ways in which we can best educate our students to read for understanding as we prepare them for a future dominated by the processing of vast amounts of information.

### **Scaffolding Reading Comprehension to Deepen Understanding of Text**

There are many studies related to reading comprehension, with a focus on effective instructional strategies, appropriate assessment techniques, and the quality of teacher pedagogy. Some studies reviewed the value of differentiating reading comprehension instruction (Firmender, Reis, & Sweeny, 2013; Jordan, 2015; Shaunessy-Dedrick et al., 2015), while others examined the effects of differentiation and reading intervention on reading comprehension (Jefferson, Grant, & Sander, 2017; Little, McCoach, & Reis, 2014). The benefits of explicit instruction were researched by several authors (Pratt & Logan, 2014; Van Keer & Verhaeghe, 2005b; Zimmerman, 2014) and there was a great deal of research devoted to the factors leading

to strong understanding of text (Smit, van de Grift, de Bot, & Jansen, 2017; Spencer et al., 2013; Verhoeven & Van Leeuwe, 2008). Assessment of reading comprehension is pivotal in determining appropriate programming for students and is necessary when identifying gaps in understanding. Research in this area supports formative assessment techniques, but also compares formative assessment to traditional, standardized assessments (Elleman, Compton, Fuchs, Fuchs, & Bouton, 2011; van Rijk et al., 2017). Based on such findings, it is essential to review the research presented to examine the best instructional approaches to teaching reading comprehension as well as how to assess progress. It is worth discussing the importance of teacher expertise when facilitating reading comprehension strategies. In this review, I will provide answers to three specific questions: (a) Does explicit strategy instruction by expert teachers lead to deeper understanding of text than a generalized approach to teaching reading? (b) Does a differentiated reading approach affect growth in reading comprehension? and (c) Does formative assessment more accurately identify early reading difficulties than summative, standardized testing?

### **Teacher Expertise and Explicit Strategy Instruction**

The first question in this literature review is “Does explicit strategy instruction by expert teachers lead to deeper understanding of text than a generalized approach?” This question examines the nature of reading instruction, and the implications of quality pedagogy in the growth of reading comprehension. The benefits of explicit strategy instruction are reviewed by exploring findings that discuss (a) complexity of thinking; (b) teacher expertise; (c) instructional contingency; and (d) integration of reading into content-specific areas. This question warrants a discussion about strategy instruction, specifically focused on reading comprehension, as well as the significance of how effective modelling of these strategies impacts teaching.

**Complexity of thinking.** The development of reading comprehension is not a singular skill. It is a complex, metacognitive progression of thinking that involves knowledge building and deep connection to text. Because of its complexity, reading comprehension instruction has been thoroughly researched and there is much empirical evidence to support specific reading comprehension approaches, designed to support knowledge acquisition, and deep, meaningful reading of text. With this complexity comes a need for teachers to have adequate knowledge about best reading comprehension pedagogy and instructional approaches.

*Review.* The development of reading comprehension is complex. My first research question examines the deep understanding of text, and questions whether explicit strategy instruction leads to deeper understanding than a generalized approach to teaching reading. Research suggests that students must be able to access complex thinking processes, often simultaneously, to read text with meaning (Rodgers, 2004/2005; Spencer et al., 2013; Van Rijk et al., 2017). The authors suggest that reading comprehension is multidimensional, requiring readers to move beyond simply processing text, to building an in-depth understanding that allows students to integrate the meaning of text and stimulate deeper cognition. Classroom environments that are conducive to the process of reading for meaning include teachers that recognize the complexity of reading comprehension pedagogy and the necessity for explicit strategy instruction. Spencer et al. (2013) researched the depth of thinking necessary for students to understand text and their findings revealed that while the goal of comprehension is to answer questions about stories, there is a complex process that occurs while thinking about the text involving memory, oral language, and language comprehension. It is essential to acknowledge these significant factors that may inhibit deep understanding of text. Several studies examined the complexity of thinking necessary for students to understand, and respond appropriately, to

text (Rodgers, 2004/2005; Spencer et al., 2013; Van Rijk et al., 2017). Researchers determined that when children are reading to gain understanding of text, they are required to decode letters, sounds, and words, while staying focused on the meaning of the text. The reader must be aware of discrepancies in text to be able to monitor and self-correct when something doesn't make sense. A reader who has strong comprehension skills can integrate information through a variety of cognitive processes (Pratt & Logan, 2014; Rodgers, 2004/2005), but the research suggests that many students have insufficient strategies to help them embed decoding skills, oral and language comprehension, and memory to understand text.

The research evaluates the strategies necessary to help students embed decoding skills, listening comprehension, and accessing background knowledge, simultaneously, while reading text. This task is complex and requires specific instruction by teachers to develop strong reading comprehension. Researchers examine the importance of explicit strategy instruction and its connection to deeper understanding of text. There has been a wide range of research devoted to the cognitive attributes associated with reading comprehension. Explicit strategy instruction allows teachers to look at the specific dimensions of reading comprehension including decoding, phonological processing, listening comprehension, verbal knowledge, working memory, and nonverbal reasoning (Cho, Roberts, Capin, Roberts, Miciak, & Vaughn, 2015). Successful readers can decode letters and words, while simultaneously interpreting aural stimuli and connecting the words to background knowledge. Readers who can gain deep understanding of text are able to integrate new information with prior knowledge and they are able to access verbal knowledge, or vocabulary, to adequately respond to text. Deficits in any of these areas often result in reading comprehension impairments (Cho et al., 2015). Researchers acknowledge

that this is a complex, multi-faceted process that involves quality pedagogy and an awareness of the complexity of thinking required to understand text.

*Discussion.* In analyzing the results related to complexity of thinking, and its relevance to the importance of explicit strategy instruction in reading comprehension, there is increasing research suggesting that teachers must adapt instruction in reading comprehension to focus on specific deficits in thinking (Cho et al, 2015; Pratt & Logan, 2014; Rodgers, 2004/2005). To affect growth in comprehension, teachers must be able to identify these specific deficits in comprehension including decoding, listening comprehension, working memory, verbal knowledge, and accessing prior knowledge. In one specific study, reading comprehension was assessed using a variety of measures including tests that evaluated working memory, verbal knowledge, listening comprehension, phonological processing, attention, self-efficacy, and reading comprehension. The findings support the need to look at reading comprehension as a complex series of processes, interdependent and connected, with specific strategy instruction necessary to respond to specific student need (Cho et al., 2015). In researching the complexity of scaffolding reading comprehension instruction, Rodgers (2004/2005) highlights the need to differentiate strategy instruction to ensure students comprehend different text complexities, depending on reading comprehension skills.

Findings related to complexity of thinking suggest that it is imperative to determine what steps to take if learners are unable to understand text. This happens through specific assessment of skills, with appropriate strategy instruction designed to lessen gaps in achievement (Pratt & Logan, 2014). Higher level thinking strategies are complex to teach and to learn, especially when students do not have sufficient background knowledge about text. The research suggests that teachers may often only ask retrieval questions that are found easily in the text. If teachers are

teaching generalized reading comprehension strategies, rather than explicit strategies devoted to higher order thinking and verbal reasoning skills, students may be limited in their ability to comprehend text (Zimmerman, 2014). Research suggests that teacher expertise is an integral part of good reading comprehension instruction, in that an effective teacher will be able to identify causal factors related to reading comprehension difficulties. Teacher expertise will contribute to a determination of weaknesses in reading skills, including decoding, working memory, vocabulary, background knowledge, and executive functioning (Elleman et al., 2017).

**Teacher expertise.** There is ample evidence in educational research that suggests that there is a direct correlation between quality of teaching and reading growth (Jordan, 2015; Pratt & Logan, 2014; Shaunessy-Dedrick et al., 2015; Van Keer & Verhaeghe, 2005b). In this literature review, I examine the research surrounding the answer to the question “Does explicit strategy instruction by expert teachers lead to deeper understanding of text than a generalized approach?” In this next section, I will discuss what the research says about the importance of teacher expertise in reading comprehension instruction.

**Review.** Reading instruction is critically important, as it is relevant to all aspects of the curriculum and it permeates into the workplace. Reading proficiency is the cornerstone for achievement in school and therefore the quality of instruction in reading is a topic researched broadly in the education community. Research has looked closely at the effects of a differentiated reading approach, to allow teachers to support students who are struggling with reading comprehension as well as those who are exceeding expectations (Flores & Duran, 2016; Reis, McCoach, Little, Muller, & Kaniskan, 2011; Rodgers, 2004/2005; Shaunessy-Dedrick et al., 2015). In the research conducted by Pratt and Logan (2014), the findings suggest that the amount of time teachers spent explicitly supporting comprehension skills reflected positively on

children's growth in reading comprehension over one school year. Researchers are exploring the question of how teacher expertise with specific strategy instruction can increase the quality of language-focused comprehension. The findings support the need for specific instruction in vocabulary development, text-structure analysis, and discussion of text (Cain et al., 2004; Pratt & Logan, 2014) and teacher expertise allows for the understanding of reading comprehension as a complex set of processes that require different cognitive skills.

The cognitive skills necessary to understand and find meaning in text are interwoven and difficult to teach. Reading comprehension continues to be an area in which students persistently have difficulty. Pratt and Logan (2014) refer to a study by Connor et al. (2006), in which researchers studied the amount of time teachers spent on instruction specifically devoted to language-focused comprehension. The results revealed that there is a positive correlation between language development and the amount of time focused on comprehension instruction. While there is overwhelming research to support explicit strategy instruction to develop language comprehension and ultimately reading comprehension, Van Keer and Verhaeghe (2005b) imply that teachers still often revert to a traditional reading approach in which teachers question students about text, literally but not inferentially. To help teachers develop more effective reading comprehension pedagogy, Van Keer and Verhaeghe (2005b) discuss the implications of empirical research surrounding instructional practice which supports differentiated strategy instruction. The findings suggest that professional development for the implementation of effective reading comprehension strategies is necessary to prepare teachers to teach to a variety of abilities in reading. Researchers compared two different models of professional development (year-long coaching and short, informative sessions describing specific strategies) to help teachers become more effective in reading comprehension pedagogy. In one model, teachers



were encouraged to facilitate instruction with collaborative groups. Students learned specific strategies through modeling, and there was a gradual release of responsibility, from teacher-led to student-centered, to emphasize self-regulation of strategies. Professional development that was ongoing with the support of a literacy coach and provided greater opportunity for development of teacher expertise. Teachers were active participants in the process; they were encouraged to reflect upon strategy instruction and to provide feedback to encourage further growth.

Research findings in several studies (Pratt & Logan, 2014; Van Keer & Verhaeghe, 2005a; van Rijk et al., 2017) indicate that teachers recognize the value of differentiation of strategies to support diverse learning abilities and difficulties students encounter in comprehending text. To develop efficiency in teaching reading comprehension, the research (Reis et al, 2011; Van Keer & Verhaeghe, 2005a; van Rijk et al., 2017) supports the need for teachers to be provided with a strong theoretical background supporting specific strategy instruction, identification of best practices in reading comprehension pedagogy, differentiated lesson plans, as well as time for reflection and performance feedback.

Several studies (Dougherty Stahl, 2009; Rodgers, 2004/2005; Smit et al., 2017) support the efficacy of the gradual release of responsibility in providing students with the tools necessary for deep understanding of text. Teachers who have an intricate understanding of the needs of each student can provide students with different amounts of support, from demonstrating, to informing, to questioning. Teachers with expertise in adapting instruction for a diverse group of learners can model learning, give instructions, and provide appropriate feedback while gradually moving learning from teacher-led to student-centered. Studies also suggest that gradual release of responsibility is a difficult concept for many teachers to understand, especially if they have limited expertise in reading comprehension instruction and if they are more comfortable with a

traditional, whole-class model of instruction. This model of instruction requires teachers to move from whole-class to smaller student-led groups for strategy instruction and implementation, as well as discussion and personal connections.

**Discussion.** The importance of specific strategy instruction in reading comprehension is significant, but it is also dependent on the quality of instruction provided by the teacher. I reviewed literature that strongly supports the need to develop specific reading comprehension strategy instruction, but there is also an overwhelming amount of literature that acknowledges that many teachers still teach reading comprehension in a traditional, whole class setting (Dougherty Stahl, 2009; Van Keer & Verhaeghe, 2005). The research reflects the experiences of teachers who move from whole-class to small group, student-centered instruction. Teachers' responses accurately reflect the difficulty with implementation of specific strategy instruction for reading comprehension; teachers feel it takes more time to differentiate instruction for a diverse group of learners, it is more difficult to find appropriate text for small group instruction, and it is harder to assess students formatively, rather than in a traditional, standardized testing format (Smit et al., 2017; Van Keer & Verhaeghe, 2005b). To appropriately support a whole class of learners, teachers must be adept at scaffolding instruction to foster reading comprehension development. An expert teacher will scaffold strategies by providing temporary and contingent support to develop growth in comprehension. A teacher who can scaffold instruction appropriately will model, demonstrate, ask questions, instruct, and give feedback to develop deeper understanding of text. Teacher expertise is necessary when adapting strategy instruction to foster this comprehension development. A teacher can facilitate the development of language, but an effective teacher is also able to engage students to participate actively in learning so that each learner "is willing to make a cognitive contribution to the acquisition process" (Smit et al.,

2017, p. 118). Teacher expertise results in deep, meaningful student learning but it is important to reflect on differences in quality of teaching and the impact that teaching has on the reading development of students. As Fisher, Frey, & Hattie (2016) say quality of teaching and explicit instruction have a significant impact on student learning. The findings (Pratt & Logan, 2014) point out that teachers must take the time to purposefully plan reading comprehension instruction so that students become better prepared to engage in cognitive comprehension strategies simultaneously, rather than independent of, reading fluency.

**Instructional contingency.** In this literature review, I use research to answer the question “Does explicit strategy instruction by expert teachers lead to deeper understanding of text than a generalized approach?” It is important to discuss the implications of instructional contingency when examining specific strategy instruction in reading comprehension. Expert teachers understand the complexities of fostering effective and efficient learning by providing students with appropriate instructional contingencies. These teachers understand how to support learners and can determine appropriate levels of support, or scaffolding, to develop reading skills.

**Review.** My research findings supported the benefits of teachers providing instructional contingencies to support diversity of need and skill in classrooms. As students progress to middle school, the discrepancies between reading achievement and teacher expectations become more pronounced. The findings in several studies (Meyers, Cydis, & Haria, 2015; van Rijk et al., 2017; Verhoeven & Van Leeuwe, 2008) suggest that achievement gaps in reading become more noticeable as students engage with more complex text, and as they are required to apply higher order thinking skills while reading to understand text. Researchers suggest that reading comprehension instruction must be adaptable, and teachers must allow for a variety of instructional contingencies to scaffold instruction. Reading comprehension instruction has been

researched in a variety of ways, with the literature encouraging teachers to work collaboratively to create and implement evidence-based strategies that will develop deep thinking skills. While research has generally characterized early literacy development with phonics and word attack skills, reading theory has more recently acknowledged the importance of reading for meaning when developing reading comprehension skills. To adequately measure a student's ability to decode, read fluently, and read with understanding, a teacher must be able to assess progress while simultaneously listening to a student read (Van Keer & Verhaeghe, 2005b; van Rijk et al., 2017). From this type of assessment, an expert teacher will be able to provide a student with the appropriate instructional contingencies to scaffold reading instruction. In Elleman et al.'s (2011) research, the authors explored dynamic assessment that measures a student's reading comprehension abilities, as well as making hypotheses about future comprehension performance. This dynamic assessment allowed teachers to scaffold reading instruction to try to decrease gaps in understanding; The assessment was found to be more valid in assessing comprehension than traditional assessments because this assessment was not constrained by word identification skills.

An expert teacher will be able to provide appropriate strategies to support comprehension dependent on the needs of each student. Reading strategies should focus on specific student need, and support should consist of instructional contingencies that adjust to the reading levels of each student. These instructional contingencies may include flexibility in text choice, different levels of support and interaction, as well as specific word identification strategies, and different amounts of time with text (van Rijk et al., 2017). There is a wide body of research that supports the use of effective vocabulary instruction to enhance reading comprehension skills (Cho et al., 2015; Dougherty Stahl, 2009; Spencer et al., 2013). To increase text comprehension, researchers suggest that teachers intentionally include vocabulary instruction while teaching comprehension

strategies. The benefit of introducing new vocabulary, its definition, and the context in which the word is represented in text, is thought to increase text comprehension.

Teachers who can provide students with meaningful instructional contingencies to increase reading comprehension provide students with texts that are engaging and meaningful. Students must find relevance in the reading of specific text and adept teachers will find texts that students can relate to by connecting the story to their own background knowledge. A student who is actively participating with text will ultimately find deeper meaning and apply more thoughtful responses (van Rijk et al., 2017). The goal of explicit strategy instruction in reading comprehension is to find ways for students to develop deep meaning from text, and to ask questions to further their understanding. A student who is engaged in text is going to stay focused on the message conveyed in the text to analyze the information and make inferences about the reading (Rodgers, 2004/2005).

Experienced teachers may find it easier to negotiate the difficult task of providing instructional contingencies in reading comprehension instruction. It has been stated repeatedly that comprehension is a complex process and because it is not a linear process, students will require different supports, at different times while interacting with a text. While expert teachers can scaffold instruction to support and then allow students to learn independently, this contingency is more difficult for teachers who have not experienced diversity of need with students (Dougherty Stahl, 2009). It is often this inexperience that results in teachers reverting to whole-class instruction for reading comprehension, rather than explicit strategy instruction focusing on specific skills. Meyers et al. (2015) found that evidence-based strategies were most effectively taught in small guided reading groups. Guided reading groups provide a structure to “present concepts and content systematically, as the selection is introduced, read, discussed

including built in assessment tools” (p. 148). Teaching explicit strategies for small groups allows teachers to include instructional contingencies for each group, allowing for increased engagement and meaningful instruction.

**Discussion.** The main goal of reading instruction is to enable students to read fluently, and with good understanding. In this literature review, I have researched to find the answer to the question “Does explicit strategy instruction by expert teachers lead to deeper understanding of text than a generalized approach?” and to answer this question, I have also looked at instructional contingencies that allow teachers to scaffold instruction for students so that each student is maximizing meaning with text. An experienced and knowledgeable teacher can create a learning environment in which each student finds value in reading and feels confident in his/her ability to read complex text. A strong teacher will provide students with appropriate strategies to develop a deeper understanding of text, and he/she will also provide students with background knowledge about why it is important to have a toolbox of reading strategies to support comprehension.

While teacher competency is invaluable, it is also important to acknowledge that teaching reading requires more than exemplary pedagogy. Teachers must also be flexible in their instructional approach, recognizing that students require different instructional contingencies to be able to engage with text. If a student is not motivated to read a text, it will be incredibly difficult to help a student access background knowledge, make connections to text, or ask deep-thinking questions related to the text. To be able to apply explicit strategies to further develop reading comprehension, a student must be motivated to read. “Reading proficiency has been linked to several aspects of the individual learner, including motivation, attitude, skill (in reading fluency and comprehension), as well as contextual considerations, such as instructional approach (Slavin, Lake, Chambers, Cheung, & Davis, 2009).

While the research overwhelmingly supports explicit strategy instruction instead of a more traditional, generalized approach to teaching reading comprehension, there is some hesitation from researchers about whether teachers are willing to commit to extra planning time, and to creating environments that allow for small-group instruction (Elleman et al., 2011; Meyers et al., 2015; van Rijk et al., 2017). Differentiating instruction by creating instructional contingencies for specific student need is a task that requires time, training, and expert pedagogy. While the benefits outweigh the negatives, teachers in several studies (Shaunessy-Dedrick et al., 2015; Van Keer & Verhaeghe, 2005a) reported the workload associated with explicit strategy instruction rather than whole-class instruction was more demanding and often difficult to maintain.

**Integration of reading comprehension in subject-specific content.** To accurately answer the first question in my literature review, “Does explicit strategy instruction by expert teachers lead to deeper understanding of text than a generalized approach?” it is important to discuss the research behind the integration of reading comprehension instruction into subject-specific content. As students move from primary to middle school, the general focus on reading instruction moves from learning to read to reading to learn. Research points to a direct correlation between the expectations of teachers to have students read and understand complex subject-specific text and increased gaps in achievement. In answering this literature review question, it is important to address how to build capacity in students to read and understand complex texts.

**Review.** The empirical research articles related to reading comprehension and explicit strategy instruction in content-specific areas of the curriculum refer to evidence of students’ interest and engagement in reading diminishing as students move to middle school (Little et al.,

2014; Ritchey, Palombo, Silverman, & Speece, 2017). The findings suggest that educators must be cognizant of the need to differentiate instruction and content to ensure students are motivated to read. Little et al., 2014, discussed the implications of a SEM-R (Schoolwide Enrichment Model-Reading) framework, in which students chose reading materials in areas of interest, with teachers scaffolding instruction during conferences. In this model, teachers were able to facilitate instruction in reading comprehension with specific goals for understanding content-specific text. While there is evidence showing the benefits of student choice of text, it is also important to note the need for teachers to provide students with specific strategies when reading text that is not interesting but required to meet curriculum objectives (Davis & Guthrie, 2015; Ritchey et al., 2017).

In a compelling study conducted by Davis & Guthrie in 2015, the authors examined the structure of discipline-based reading instruction with a science text. Reading text in a specific discipline requires specific understanding and background knowledge. A reader must interpret information very differently in a social studies text than he would in reading a mathematics text. While understanding of all text requires a degree of critical thinking, each content-specific reading of text requires recall of information, prior knowledge, and explicit strategies to support repeated reading of text. Content reading requires a significant amount of background knowledge to interact with complex text. Students move from reading instruction in which they learn to read, to reading to learn.

Early literacy practice requires students to decode words, by breaking them into smaller parts using phonological awareness strategies (Cain et al., 2004; Spencer et al., 2013). As text becomes more complex, students are required to use metacognitive strategies (Davis & Guthrie, 2015) while simultaneously trying to decode individual words. Students who are proficient



readers can do this effortlessly; Struggling readers must use explicit strategies to help maintain meaning while reading text (Davis & Guthrie, 2015; van Rijk et al., 2017;). The difficulties of reading complex text become compounded when students are required to read subject-specific text (Ritchey et al., 2017).

Because of the complexities involved in reading discipline-specific text, the findings in research suggest supporting comprehension strategies explicitly designed for reading informational texts. In middle-school and high-school subject areas, students are required to learn, analyze, and synthesize content that requires higher level thinking. These texts are often lengthy, complex, and require specific background information. Researchers recommend explicit instruction that includes modeling of specific strategies before, during, and after, reading. Summarization techniques, identifying the main idea, and making connections to the text by narrowing in to specific ideas will support deeper comprehension (Ritchey et al., 2017).

Researchers also found value in peer collaboration and self-regulation to promote a deeper understanding of discipline-based text (Flores & Duran, 2016; Souvignier & Mokhlesgerami, 2006; Van Keer & Verhaeghe, 2005a). Several studies examined and evaluated a response-to-intervention (RTI) model to measure growth in reading comprehension through peer tutoring, and collaboration (Flores & Duran, 2016; Ritchey et al., 2017). This model was used to support evidence-based comprehension pedagogy, and the results of qualitative studies showed growth. Allowing students to work and learn collaboratively with peers has been found to positively affect growth in reading comprehension (Flores & Duran, 2016; Ritchey et al., 2017; Souvignier & Mokhlesgerami, 2006).

In addition to explicit strategy instruction in discipline-based reading, peer collaboration, and self-regulation of reading materials, there is also research that supports the importance of

exposing students to expository text at an early age (Jordan, 2015). This researcher argues that children should develop reading skills with authentic text. Jordan conducted a qualitative study to address the need for students to be exposed to rich, authentic text and she discusses the importance of dialogue surrounding expository text. The research findings highlight the need for students to be actively engaged and participating with text so that it is meaningful and relevant. This, the research suggests, is essential to understanding discipline-based text.

*Discussion.* While the research supports a pedagogy that includes specific reading instruction focused on discipline-specific strategies to support comprehension, it is important to include a discussion about teacher perception of reading instruction in middle years. There is evidence to suggest that teachers in middle years classrooms perceive students to be proficient readers already and that further strategy instruction is not necessary (Mesmer & Hiebert, 2015; van Rijk et al., 2017). This is a fallacy, in that reading achievement results from the National Assessment of Educational Progress show that 65% of students in the fourth grade scored below proficient in reading (Ritchey et al., 2017). Teachers must be prepared to include explicit reading comprehension strategies embedded into content-specific instruction so that students are able to better understand and interact with complex texts across subject areas.

As students are required to read increasingly complex texts, individual reading profiles become significantly diverse. Reading problems must be addressed through explicit, targeted strategy instruction as well as small group instruction that incorporates modeling and guided practice. In addition to ensuring that students have access to accommodations to help better understand complex, informative text, students must also be able to access specific interventions to help lessen gaps in reading comprehension (Ritchey et al., 2017).

Reading informational text provides students with a base of knowledge to add depth to their understanding of specific subject areas. Davis & Guthrie (2015) analyzed three different studies to learn about the “structure of knowledge built from reading content area texts as measured through the use of proximity data” (p. 161). This topic demands further discussion, as there is merit in understanding the complexities of informational text, as well as the indicators of acquiring understanding with this type of text. The findings of this study indicate that comprehension of higher order thinking skills demands the creation of “global relations and connecting them to systematic informational support from the text” (p. 161). Researchers of reading comprehension have maintained that certain cognitive processes are necessary for students to understand text, including vocabulary knowledge and summarization of the main idea (Davis & Guthrie, 2015; Goodwin, 2016).

The results of research in morphology suggest that there is a need to integrate vocabulary knowledge with comprehension instruction, particularly when facilitating reading comprehension in content-specific areas. As students are required to read content-specific text, the vocabulary becomes more technical and abstract. Without explicit strategy instruction to help understand the meanings of these specific vocabulary words, students will struggle to comprehend the main idea of a content-specific text (Goodwin, 2016). Word learning and understanding become an essential part of reading comprehension in content-specific texts and the challenges and implications of embedding this type of pedagogy into middle-school and high-school instruction become a topic of further discussion.

The implications of embedding reading comprehension throughout the curriculum require a level of expertise in explicit strategy instruction, as well as in how to differentiate pedagogy to accommodate the needs of every student. Addressing the pedagogical needs of each student

demands a high level of experience and expertise in formative assessment, and the next section of this literature review will examine formative assessment techniques that determine how to most appropriately differentiate reading comprehension outcomes. As noted in many research articles, early learning classroom teachers often focus predominantly on reading fluency and phonological awareness skills, rather than on comprehension. “With this emphasis and focus on word identification skills and fluency, schools may have inadvertently created readers whose word reading is accurate but who do not understand the text content” (Jefferson, Grant, and Sander, 2017, p. 98). My intent will be to review the ways in which teachers can simultaneously teach comprehension and word identification skills, through best practice, explicit strategy instruction, and formative assessments that support authentic reading.

Research supports the need to differentiate reading instruction, but there is also substantial literature that recognizes that reading instruction often does not appeal to student interest (Little et al., 2014; Shaunessy-Dedrick et al., 2015; Van Keer & Verhaeghe, 2005b; Van Rijk et al., 2017). While exploring the effects of a differentiated reading comprehension approach, it is important to also address the connections between comprehension assessment measures and students’ attitudes about reading. Teachers are challenged to teach reading skills and strategies to a diverse group of students who come to school with a significant range of abilities, attitudes, and skills. As I move into the next section of this review, I will address the ways in which teachers can scaffold reading comprehension skills by creating flexible instruction groups, and by addressing contextual factors that may be inhibiting growth in reading (Firmender et al., 2013; Reis et al., 2011; Rodgers, 2004/2005). The factors that I will specifically address in this section will include: (a) reading motivation; (b) student engagement; and (c) peer-tutoring.

Further to the conditions that affect reading comprehension in specific students, it is important to acknowledge and create dialogue about how to specifically address differentiation of reading instruction in classrooms. Differentiation of reading instruction requires a specific level of expertise in pedagogy, and it requires professional development for teachers as well as support from administration to move from homogeneity in instruction to differentiation. Research suggests that the disparity in reading levels among students in the same grade increases as students grow older. Firmender et al., 2013, discuss the need to understand and accommodate for a wide range of abilities, and disabilities, in reading instruction. Teachers must understand “the range of reading achievement in students to better plan and implement both the level and type of differentiated instruction and content to engage and challenge students at all reading levels: (p. 3). Differentiation in instruction is critical for reading success, to support struggling readers but also to enrich reading experiences for students who need to be challenged in reading because they understand and read fluently beyond grade level expectations. Differentiated instruction accommodates the needs of all learners, and in continuation of this review, I will discuss the parameters of SEM-R (Schoolwide Enrichment Model-Reading) by discussing reading comprehension strategies that have been researched to modify and enrich programming (Reis et al., 2011).

It is important to examine how to most effectively differentiate reading instruction for all students, especially those who are above and below grade level in reading achievement. Evidence-based research supports the need for teachers to differentiate reading comprehension instruction to address gaps in achievement, but the discussion must also involve how teachers effectively assess growth in reading fluency and comprehension. Professional development can provide teachers with explicit strategies and skills to support reading comprehension growth, but

it is also essential to give teachers appropriate formative assessment techniques to allow them to focus on specific areas of weakness while working in flexible instructional reading groups. The research suggests that “reading comprehension assessments, constrained by students’ word recognition abilities are unlikely to identify problems that may occur when the text complexity increases to match the students’ linguistic abilities” (Elleman et al., 2011). In the next section of this review, I will discuss early reading measures that formatively detect comprehension deficits so that delays can be addressed earlier in reading instruction.

Effective reading comprehension requires a high level of teacher efficacy, as well as explicit strategy instruction. In addition to this thoughtful pedagogy that allows teachers to examine the complexities of reading comprehension, educators must also be able to create a classroom environment that promotes differentiated learning to ensure that students develop confidence in reading and are motivated and engaged in the reading process. To do this effectively, teachers must be able to formatively assess reading comprehension growth. The research suggests that it is imperative to address the significant gaps in reading achievement as early as possible, with explicit strategies, instruction, and assessment.

### **Implications**

In the next section of this paper, I will reflect on the importance of providing explicit, differentiated reading comprehension instruction to ensure that students are reading stories, information, and text in content-specific passages with deep understanding. I will briefly review the empirical research findings which support explicit reading comprehension instruction, early intervention for struggling readers, and appropriate formative assessment practices. I will then link these research findings to my implications, which will provide specific evidence-based strategies to improve reading comprehension from kindergarten through to grade 12. My

implications will also discuss the importance of early intervention and the significance of expert teachers who are able to differentiate reading instruction to meet the needs of all learners. My experiences in classrooms from kindergarten to grade 9 have brought forth concern about the gaps in achievement, primarily in reading for understanding. While primary teachers focus their attention on reading fluency and decoding, the research supports an integration of reading strategies that simultaneously teach students to read fluently and with excellent comprehension. One of the most noticeable difficulties in reading comprehension is highlighted once students begin to read content-area text, specifically nonfiction reading passages. Students who have not developed specific, targeted strategies to support the deep understanding of complicated text will struggle in every subject they encounter in school. This reality forms the basis of the next section of my paper.

In the literature review section of my paper, my research questions led me to focus on explicit, differentiated reading comprehension instruction with an emphasis on formative assessment practices. The findings indicate that reading comprehension instruction does not develop linearly but rather through active processing of information before, during and after reading. Further, reading comprehension does not occur simply because students are able to decode and read words fluently. Students develop comprehension because they can make connections to background information, they are able to make inferences about the text, and they are able to use strategic reasoning to remember important details from the text to support, and develop, new learning. Learning to read with deep understanding is a complex task, and this section of my paper will attempt to provide strategies, understanding, and support about how to facilitate reading comprehension instruction that is differentiated and meaningful. As I delve into the empirical research supporting differentiated reading comprehension, and how to best support

scaffolded reading comprehension, I formulated three questions to guide my research and further implications: (1) Does explicit strategy instruction by expert teachers lead to deeper understanding of text than a generalized approach to teaching reading? (2) Does a differentiated reading approach affect growth in reading comprehension? and (3) Does formative assessment more accurately identify early reading difficulties than summative, standardized assessment? The findings from the empirical research led to my reflections about what we can do to support teachers with meaningful professional development in differentiated reading comprehension instruction, as well as teaching reading to understand content-based text. My implications will support coaching and mentorship within classrooms to provide both teachers and students with strategies and skills that will deepen understanding of text across the curriculum. It is my hope that with meaningful professional development, we will be able to assess and diagnose reading difficulties early so that we can provide appropriate, targeted interventions that will lessen achievement gaps in reading comprehension.

As a beginning teacher responsible for teaching students to read, I must admit that I really wasn't sure where to begin with pedagogy, how to instruct, or even how to assess growth in reading. I was proud when my students decoded well, and I used a whole language framework to provide students with what I thought was appropriate instruction. Reflecting on my first experiences as a reading teacher, I know that I was unable to lessen gaps in achievement because I wasn't sure where the gaps were, or how to fix them. My expertise in reading instruction has come from acute observations of students reading, much personal reflection, excellent professional development, and work with expert teachers in reading. My goal in this section of the project is to provide teachers with tools to support reading comprehension instruction in classrooms filled with diverse learning needs. It is imperative to provide teachers with tools to



support students who struggle with understanding, as well as those who need to be challenged with reading selections. I will provide a framework for teaching reading comprehension, differentiated to meet the needs of all learners, appropriate formative assessment strategies to diagnose reading comprehension difficulties, and effective strategies that incorporate vocabulary development, linguistic comprehension, listening comprehension, and phonological processing to lessen the achievement gaps in reading comprehension. In addition, I will provide effective professional development to share explicit reading comprehension strategies for students who are learning to read, as well as content-specific strategies for students who are reading to learn.

### **Framework for Differentiated Reading Comprehension**

Reading comprehension is a complex process and in developing a framework for teachers, it is important to provide evidence-based theory about how children learn to read so that teachers can provide more effective reading comprehension instruction in classrooms. Reading comprehension instruction must include “decoding and linguistic comprehension when successful readers decode symbols (letters and words) and create meaning from language” (Cho et al., 2015, p.160). The process of teaching reading comprehension is most effective with a layered approach. Decoding must include word reading and fluency, as well as phonological awareness and rapid word naming; Linguistic comprehension includes listening comprehension, vocabulary, and background knowledge (Cain et al., 2004; Cho et al., 2015; Goodwin, 2016). Strong reading comprehension skills develop when students have a broad understanding of all these cognitive processes. In much of the supporting empirical literature, researchers have reported that many teachers lack an understanding of the complexity of these interacting

cognitive processes, and therefore add comprehension strategies limited to question-answer recall.

### **Effective Professional Development for Teachers in Reading Comprehension**

As we investigate the underlying cognitive processes that interact to help children understand text, we must be responsive to intricacies of comprehension. “Text comprehension involves the formation of a meaning-based representation of the text” and “the processes of integration and inference are important to the construction of an integrated and coherent model of a text” (Cain et al., 2004, p. 31). Many teachers have not had adequate professional development in reading comprehension instruction, and therefore are ill-equipped to understand the depth of knowledge necessary to differentiate learning so that all children develop strategies to support deep comprehension (Meyers et al., 2015). Phonological processing involves the phonological features of language including “the ability to understand sound structures and manipulate the sounds of spoken language” (Cho et al., 2015, p. 160) and rapid naming. Students who have difficulty with phonological processing may need intervention at the word reading level but children who struggle with comprehension most often need further intervention to help target listening comprehension skills, and verbal and background knowledge. There is a direct correlation between listening comprehension and reading comprehension, in that listening comprehension involves the “encoding of incoming aural stimuli, transforming encoded content to a mental representation, integrating the representation into existing knowledge, and storing it in long-term memory” (Cho et al., 2015, p. 160). As students begin to read increasingly complex text, moving beyond word recognition, they need to rely on adequate background knowledge to support understanding of text.

Beyond the basic components of comprehension pedagogy, teachers must facilitate growth in verbal knowledge, or vocabulary development, to improve reading comprehension. Much empirical research has focused on the connection between vocabulary development and how deeply children understand text. There is a direct correlation between vocabulary, comprehension, and reading proficiency. Researchers have determined that “many children begin formal schooling with limited oral language skills placing them at risk of later reading failure and diagnosis of reading disability” (Spencer et al., 2012, p. 196). The implications of this research include the need to prepare pre-kindergarten teachers adequately for a comprehensive literacy program that embeds oral language development. Teachers at all levels must include explicit, embedded vocabulary instruction in their literacy programming.

There are two factors that may impede a child’s ability to understand text, beyond the instruction and intervention of teachers: (1) working memory and (2) nonverbal reasoning. Text comprehension involves the formation of meaning in the brain and must be integrated into a comprehensive understanding of text. “Working memory refers to the ability to “retain information in short-term memory and retrieve information from long-term memory while simultaneously processing other incoming stimuli (Cho et al., 2015, p. 160). This is an important factor in determining how well a child can understand text because it involves embedding new information into existing schema. Working memory is particularly important when students are attempting to process information and store words, as well as to make inferences about unknown words in context in relation to their knowledge of vocabulary words. Researchers have determined that working memory affects the way in which we process text. Research supports the consideration of slow or inaccurate word reading affecting understanding “by using up too much processing capacity with little remaining for text comprehension processes such as

integration and inference” (Cain et al., 2004, p. 32). In addition to working memory, some children struggle with nonverbal reasoning, in which they struggle with logical thinking through problems. Much of reading comprehension involves the process of making inferences about text, and nonverbal reasoning weaknesses provide little opportunity to make logical judgements about the message of text. In the subsequent sections of this literature review and project, I will share implications of more thoughtful, developmentally appropriate, and differentiated strategies to develop working memory and nonverbal reasoning in early comprehension interventions.

In addition to the cognitive processes involved in developing strong reading comprehension skills, it is important to acknowledge the impact of attention, self-efficacy, and whether students are reading for enjoyment, on the depth of understanding of text. Students who are engaged in the reading process, and who feel they are adequate readers with a toolbox of strategies to support them, will make significant gains in reading comprehension with appropriate and targeted interventions. This becomes more apparent as students are reading content-specific texts that have subject-specific vocabulary and require extensive background knowledge for understanding.

### **Differentiated Reading Comprehension Strategies**

Further to providing teachers with the empirical research that underlies the cognitive, and non-cognitive attributes of a thorough reading comprehension program, it is essential to provide teachers with the tools necessary to differentiate learning so that all students have strategies to support understanding of text. The strategies of teaching in pre-kindergarten vary significantly from those in middle and high school literacy classrooms, but they all function to support deep comprehension of text. While a pre-kindergarten literacy program focuses on listening comprehension, a middle or high school teacher would rely heavily on strategies to support

understanding of text that is highly specific content, relating to individual subjects in the curriculum. Reading instruction, particularly when facilitating learning of comprehension strategies, must include “choice, differentiated instruction, and extensive, supported, independent reading with corresponding elimination of regular reading instruction” (Little et al., 2014, p. 384). Research has revealed that the provision of differentiated reading instruction, with levelled text, encourages a high level of engagement in reading, and in turn a higher achievement rate in comprehension.

Several empirical studies have examined the effects of differentiated reading comprehension on reading achievement in schools (Jefferson, Grant, & Sander, 2017; Little et al., 2014; Reis et al., 2011; Shaunessy-Dedrick et al., 2015) and the results of these studies revealed that the creation of differentiated reading groups in mainstream classrooms consistently improves reading fluency and comprehension. In Jefferson’s study in 2017, researchers measured reading assessments after differentiating reading instruction with students in a generalized grade four classroom, with students who were not identified as being “at risk.” The researchers focused on targeted reading comprehension skills, fluency, and vocabulary development. The study used a “systematic differentiated reading instruction approach that integrated fluency training with the critical outcome of truly comprehending and enjoying text” (Jefferson et al., 2017, p. 104) and the authors of the study questioned the benefits of providing fluency and comprehension instruction and practice simultaneously in a reading lesson. The results proved that there is significant benefit in providing instruction that is differentiated to accommodate the reading strengths and weaknesses of each student, while ensuring a connection between reading fluency, comprehension, and reading engagement.

While teachers tend to focus on differentiated learning experiences that will support learners who are struggling, it is important to acknowledge that differentiation in reading instruction also needs to accommodate our learners who need to be challenged with reading experiences. Differentiated reading instruction is easily accommodated in classrooms where teachers can group students who need the same instruction and guidance. Students who are struggling with specific strategies can be grouped for targeted instruction, and students who are reading books at the same level should be able to work in small groups to build and maintain fluency and appropriate comprehension. There are many differentiation practices that guide planning and implementation, including strategies to support all learners, developmentally appropriate pedagogy, and targeted instruction connected to formative assessments. There must be a connection between pedagogy and assessment for students to master specific performance expectations in reading instruction. Many research studies point to the value of a layered approach to instruction, and Shaunessy-Dedrick et al. (2015) discuss the implications of reading comprehension instruction that targets gifted students. They discuss the benefits of a layered approach to instruction, stating that “based on a targeted learning objective, teachers may modify a unit to fit the gifted student’s needs through acceleration (pace), complexity, depth, challenge, creativity, and abstractness” (p. 92). While the research in this study highlights the value of differentiated instruction for gifted students, it is beneficial to look at differentiated reading instruction as an effective schoolwide approach to literacy instruction that supports learners at both ends of the continuum of learning. In all the empirical research I examined, researchers concluded that differentiated reading instruction that also addresses students’ engagement, increases reading fluency and comprehension, while reducing achievement gaps in reading.

To address these gaps in reading achievement, teachers must provide students with strategies that modify, enrich, and adapt curriculum to meet the needs of all learners. Differentiation must occur “across five dimensions: content, instruction and teacher practices, classroom organization and environment, student products, and teachers’ personal choices of how best to implement these strategies” (Firmender et al., 2013, p. 6). Differentiation allows all students to participate in developmentally appropriate learning, and it allows for continuous growth and progress in reading achievement.

As a teacher, differentiating reading instruction may be a daunting task. How is a teacher expected to accommodate different levels of fluency, comprehension, and engagement? The implications of this question become the basis of my literature review because differentiation is a difficult process to begin, especially without the appropriate tools and strategies to support its development and growth. The process must begin with a benchmark assessment to determine each student’s strengths and weaknesses in reading fluency and comprehension. Once the teacher knows particular areas of focus, he/she must create small groups to begin instruction, knowing that each group will require specific and targeted instruction. It is essential to provide students with engaging, level-appropriate reading materials so that students are reading text at instructional level, and the teacher must have a wealth of strategies to support comprehension. I have included a PowerPoint that will help teachers facilitate rich comprehension instruction in a small group reading lesson.

### **Reading Comprehension in Content Areas**

There is ample documentation in research about the link between student reading achievement in middle school and their declining levels of engagement and interest in reading (Little et al., 2014; Firmender et al., 2013). Reading in middle years becomes a task in reading

for content, and if students have not adequately learned reading comprehension strategies in early literacy instruction, they will struggle with the complexity of text that is heavily specific to curriculum. As students move into middle years, the gaps in reading achievement become more pronounced, and this is an area that we must focus on in every mainstream classroom.

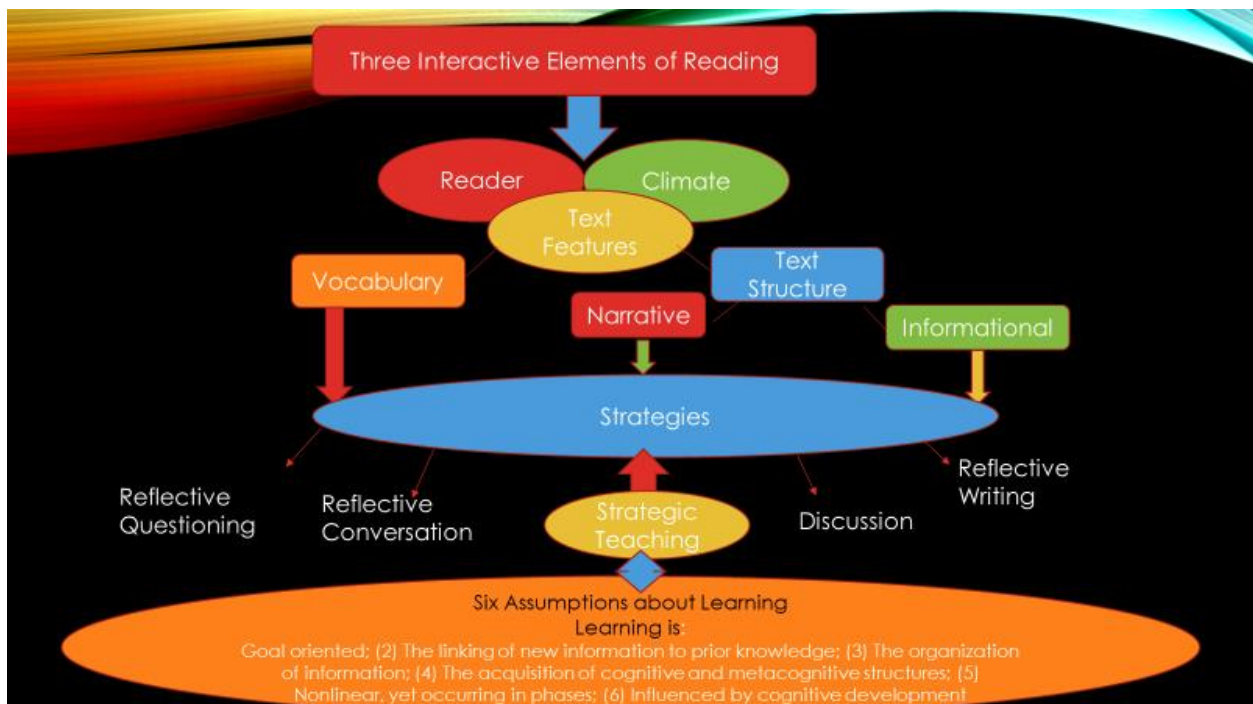
This disparity in comprehension and fluency levels requires classroom teachers to extend additional efforts to differentiate instruction and assign reading content that is above, at, and below grade level to ensure that all students are simultaneously challenged and engaged in reading. (Firmender et al., 2013, p. 3)

As a teacher, this revelation sounds insurmountable, but with appropriate professional development in differentiated literacy instruction, as well as evidence-based knowledge of differentiated learning and appropriate formative assessment, this type of instruction becomes more manageable and more efficient for learners and teachers. While the focus of reading instruction in classrooms up to grade 3 is on deeply understanding a variety of texts, reading instruction in middle years relies heavily on teaching reading in content areas. As students are required to read textbooks, and readings connected to specific subject areas, many struggle with understanding. Students are expected to read and understand a variety of texts, including informational texts across content areas. The empirical research suggests that the purpose of reading informational text is to build knowledge; however, “the type of knowledge constructed, and the organization of that knowledge will be influenced by a student’s reading comprehension proficiency” (Davis & Guthrie, 2015, p. 161). Researchers have examined the significance of background knowledge as it relates to text understanding and have found that “the reader’s background knowledge facilitates the acquisition of new information from text because semantically rich knowledge is more easily recognized and coded into memory than semantically



lean knowledge” (Davis & Guthrie, 2015, p. 162). Teachers must provide adequate reading instruction to accommodate the complexity of understanding of content-specific text.

The most important question to answer for teachers of middle years subjects is regarding strategies they can incorporate to help students become more effective with content-specific text. As students read content-specific text, they must learn to make connections between what they know and what they are learning in the text. These connections are necessary to embed meaning into the reading. Teaching reading in content areas becomes much more than decoding text; Students must construct meaning while actively processing strategies during the reading process. Reading for meaning involves actively accessing the brain to interact with text, and students must be able to evaluate and analyze ideas as they are reading to ensure they are monitoring comprehension.



Teaching Reading in the Content Areas by Rachel Billmeyer, Ph.D. and Mary Lee Barton, M.Ed. 1998

Figure X suggests that there are three elements necessary for a reader to understand and construct meaning from text: (1) the reader himself; (2) the learning climate, or environment in which reading occurs; and (3) the specific qualities or features of text. “Researchers believe that what we know is stored in knowledge frameworks called “schemata” (Billmeyer & Barton, 1998, p. 2) and students must rely on schemata to make predictions, organize information, and create new understandings from the knowledge in the text. Comprehension of content-specific text depends on a student being able to access background knowledge to support learning of new information. Because all students have different experiences and background knowledge, the comprehension of content-specific passages may be quite different for each student.

Having an awareness of the vast differences in students’ background knowledge will help teachers plan instruction appropriately. Students need to be taught specific strategies to help them activate background knowledge. Anticipation Guides and K-W-L charts, for example, can help students access prior knowledge but these strategies are only useful if students have an adequate knowledge base about a specific topic. It is essential to facilitate active processing before, during, and after reading so that students interact with text, by monitoring understanding and asking questions if the text is not making sense. Text features become increasingly important as students are reading content-specific text, and each requires a unique perspective and knowledge base. For example, reading a chemistry textbook requires a depth of understanding of technical vocabulary, while reading a social studies passage about World War II requires understanding of relationships between countries, geography, and historical connections. Teachers of middle years students should devote time to text features that will affect comprehension and pedagogy should include discussion about specific features in text (headings, illustrations, bold print, etc.), vocabulary, and text structure.

### **Reading Comprehension Assessment**

While strategy implementation in all areas of reading comprehension is crucial, teachers must also be able to assess students formatively, through the process of active reading. If teachers are prepared to differentiate learning for students in reading, they must also be able to accurately identify students who are struggling with reading fluency and comprehension. Teachers must be able to assess while listening to students read, process, and answer questions about text. A child's gaps in achievement must be addressed with targeted intervention to lessen the lagging skills. Much of the research surrounding reading difficulties as well as universal reading assessments focus on decoding and fluency difficulties but many children "emerge as poor readers in the later elementary school years with reading comprehension difficulties that were previously unnoticed" (Ritchey et al., 2017, p. 68). In response to this empirical evidence, there is a need to focus on reading interventions that target comprehension instead of just decoding and fluency. In their research, Ritchey et al. discuss the RTI Model (Response to Intervention) as a model that supports student who are struggling with reading skills. Their findings reveal that there are "few validated interventions that can be used within an RTI framework for the purposes of supporting reading comprehension in upper elementary school" (Ritchey et al., 2017, p. 68).

There are several implications for using reading comprehension interventions in response to assessment in middle years classrooms. In assessing reading difficulties, teachers and reading experts can classify poor readers into three distinct categories: (1) those with word recognition difficulties; (2) those with comprehension deficits; and (3) readers who have difficulty with word recognition and comprehension (Elleman et al., 2011). Early reading assessment measures tend to emphasize word recognition skills and decoding, whereas they should also help to identify

reading comprehension deficits. “Insensitivity of early reading measures to detect comprehension problems may contribute to the delayed identification of students with specific deficits in comprehension” (Elleman et al., 2011, p. 348). Findings in research have revealed the validity in using listening comprehension measures as opposed to targeting only word recognition skills, but there is some relevant research that suggests that there is a direct correlation between a child’s ability to generate inferences and reading for understanding. Elleman and her team of researchers have developed a dynamic assessment that includes formative feedback, prompting, and explicit responses to guide students to understand text independently. The results revealed that “dynamic assessment may be capturing skills that other comprehension tests do not address and therefore may be better suited to finding students likely to have reading problems because of comprehension deficits” (Elleman et al., 2011, p. 355). To be most responsive to the needs of each student, teachers must be adept at assessing reading comprehension skills in small, targeted, flexible reading groups.

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