THE SCIENCE OF READING

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As a preservice teacher at Walsh University, I would like to reflect on my knowledge and experiences in the classroom and with the Science of Reading. To begin, I would like to introduce myself and describe my educational journey at the university. I am studying P-5 Elementary/P-5 Intervention and will begin preclinical in the fall. I have a dual placement and will be with third grade and K-4 intervention. I am looking forward to this experience and continuing to grow in my knowledge as a future educator. Walsh University and its coursework is aligned with the Science of Reading and has provided me with a vast understanding of reading development and instructional strategies and scaffolds to support student learning. I am committed to continue to learn about the Science of Reading and to be a part of Ohio's Plan to Raise Literacy Achievement.

At the university, two professors in particular have supported my learning as a preservice teacher and impacted my understanding of and interest in the Science of Reading. I am thankful for my experiences in the courses taught by Dr. Lindsey Roush and Dr. Michelle Lenarz: Methods of Teaching Developmental Literacy, Literacy Assessment and Intervention, and P-5 Elementary Education- Language Arts and Social Studies. In these courses, I was provided with opportunities to apply my learning of the Science of Reading and instructional strategies to support reading development by planning Tier 2 interventions for struggling readers. In addition to the literacy courses taught by these professors, another notable course I have taken at the university which has supported my learning and knowledge is P-5 Elementary Assessment/Planning. This is a special education course taught by Dr. Megan Brannon. I am grateful for my experience in intervention because of the opportunities I have had to learn about the Individualized Education Program process and how to develop measurable goals, implement scaffolds, accommodations, or modifications to support student access to learning material, analyze student data and identify areas of strength and weakness, and use progress monitoring to understand student learning and plan for future instruction. This knowledge will assist with my ability to support the learning of all students and their development as emergent readers.

An understanding of the Science of Reading is crucial to support struggling readers. To plan interventions, it is necessary to begin with an understanding of the five pillars of reading. The National Reading Panel defined phonemic awareness, phonics, fluency, vocabulary, and comprehension as the building blocks of reading. By understanding the components of reading and analyzing and interpreting student data, an understanding of student strengths and weaknesses can be developed. This supports the identification of targeted areas for literacy instruction. In Methods of Teaching Developmental Literacy, taught by Dr. Roush, I was able to effectively plan literacy interventions based on areas of student need for students in first to third grade. Dr. Roush collaborated with the principal at the elementary school and supported us in analyzing student data based on formal and informal assessments and developing Tier 2 literacy interventions. The literacy interventions addressed the students' areas of need and implemented the school's Response to Intervention Framework. An important consideration when planning for the literacy interventions was how students would be grouped and how students would be assessed on their mastery of the lesson's content. This shows how thoughtful preparation is required when planning meaningful literacy lessons. My knowledge of the Response to Intervention Framework and background in intervention further assisted me in designing the interventions. This is because after analyzing and interpreting student data, I was able to use the assessments to determine the instructional focus of the interventions. The equation for the Simple View of Reading was foundational to my understanding of student performance and development of interventions. The Simple View of reading formula states that WR x LC = RC. This means that reading comprehension is the product of word recognition and language comprehension. A struggling reader with deficits in word recognition or language comprehension will not be able to achieve reading comprehension. This is something that I observed at the elementary school during my fieldwork for Methods of Teaching Developmental Literacy. I worked with a second-grade student who had strong word recognition skills and was able to read with ease. However, when asked comprehension questions or to summarize what he read, the student had difficulty. I was able to determine that the student had difficulty with language comprehension, more particularly, with vocabulary. This allowed me to front load vocabulary prior to a reading. Frontloading is an evidence-based strategy that involves pre-teaching and prepares the student to participate in the learning activity by building the student's background knowledge. My experience with this particular student was foundational to my commitment to learning more about the Science of Reading and delving deeper to understand student learning and how it can be supported. This is a testament to my commitment to support each student and his or her learning and to provide individualized supports and differentiate instruction to ensure student success in literacy learning.

Reading is a foundational skill which implements student learning across subjects and as a future elementary school teacher, I have a responsibility to support my students in their development of this skill. However, as shown by the Science of Reading and research on reading development, there is more to reading than decoding.

To be a proficient reader, one must have word recognition skills and language comprehension skills. These components are shown in Scarborough's Reading Rope. Scarborough's Reading Rope shows the intricate connection between the skills that an individual needs to develop to achieve skilled reading and understand what he or she has read. The three components of word recognition, as defined by Scarborough's Reading Rope, are phonological awareness, decoding, and sight recognition. Phonological awareness is an umbrella term and is the ability to listen to and attend to the sounds of spoken language. Phonemic awareness is the ability to listen to and attend to individual sounds, and phonics is the ability to apply the alphabetic principle and the relationship between letters and sounds to decode and encode words. These are the building blocks of reading and are developed from a young age. As an educator, it is important to support a young learner's attention to the characteristics of spoken language as this will support literacy learning. The other part of the reading rope is language comprehension skills. These skills include background knowledge, vocabulary knowledge, language structures, verbal reasoning, and literacy knowledge. As word recognition skills become increasing automatic and language comprehension skills become increasingly strategic, the reader can focus on comprehension. As an educator, it is important to understand the components of word recognition and language comprehension when teaching reading to young learners.

As a preservice teacher, understanding the skills that contribute to skilled reading is imperative to planning literacy lessons which support students. Lev Vygotsky and his teachings on the Zone of Proximal Development highlight the role of the more knowledgeable other in facilitating learning just beyond what the learner can do independently. An important part of reading instruction is that it is explicit and systematic. The reading program should be explicit, which means that it should be intentionally planned. Explicit instruction is thoughtfully prepared with consideration of the learners. Educators and parents can use incidental learning to teach young learners as concepts arise. An example of this is teaching concepts of print while reading a book to a child during shared book reading. These learning experiences are important because the child learns the concept in a meaningful context. However, as described, explicit instruction is necessary to ensure students are introduced to and provided multiple exposures to the concepts they are to learn. The reading program should be systematic, which means that it should follow a scope and sequence. A sequence is followed to introduce a letter and its corresponding sound to students as well as to introduce rules for phonics and spelling. The scope and sequence guide teachers in their instruction and is beneficial in introducing these concepts. This is because it considers the concepts students will learn and the order in which they should be introduced.

My experiences at the university and my knowledge of the Science of Reading supported me in understanding student learning and designing lessons, interventions, and supports for the five pillars of reading: phonemic awareness, phonics, fluency, vocabulary, and comprehension. I would like to share some of my experiences in the field with teaching these foundational skills and how I supported student learning by planning explicit and systematic reading instruction following the analysis and consideration of student data.

First, an example of a phonemic awareness/phonics lesson I would like to share is a literacy intervention I planned for a kindergarten student. The student had difficulty with phonemic awareness and the ability to identify the initial phoneme in a spoken word. The student also had difficulty with phonics and the ability to learn the letter-sound relationship of an individual phoneme and its corresponding grapheme. The student had particular difficulty with the letter-sound correspondence for g /g/ and w /w/. A systematic and explicit instructional routine is paramount to student learning of phonological and phonemic awareness skills. I like to begin my lesson with an auditory discovery of the phoneme. I begin by stating three words with the same initial phoneme. I ask the student what sound the three words have in common and provide the student with think-time. If the student is not able to identify that the three words have the same initial phoneme, I will provide additional support to the student by asking the student to listen to the first sound in the three words. I like to provide the student with an opportunity to identify the similarity of the three spoken words prior to providing the student with additional support. This is because it is easier to provide the student with more support, if needed. I then do a visual discovery with the student in which I ask the student to identify what letter the words have in common when written. The goal is for the student to identify that the words all have the same initial grapheme. This supports the student in understanding the graphophonic relationship between the written letter and the spoken sound. Multisensory strategies are used to support the student in learning the letter-sound correspondence. The student can trace the letter with his or her finger while saying its sound or write the letter with his or her finger in sand while saying its sound. An instructional strategy which worked particularly well with the kindergarten student was a car activity. I created a template for the letter to look like a road and the student used a car to trace the letter while saying its sound. This strategy supported the student in learning letter formation. The student learned where to start when writing the letter and it was engaging and fun for the student! The student's learning was scaffolded to read and write words with the letter-sound correspondence. This aligns with the Four-Part Processing Model and supports students in their use of the orthographic and phonological processors. To extend student learning, as the student became more proficient with word recognition, I began to incorporate elements of language comprehension in the lessons by describing the meaning of the word and using it in context. As part of each literacy intervention, an objective and measurable goal was used to guide the intervention session, determine student learning, and plan for future interventions.

Second, I would like to share about literacy interventions I have planned to support students with high frequency word acquisition. High frequency words are words that must be explicitly taught since they appear so frequently in print. This was a consideration when planning literacy instruction for students in first, second, and third grade. This is because a word does not become a sight word by memorizing the visual form of the word. Rather, a word becomes a sight word by connecting the graphemes, phonemes, and meaning. When planning instruction for students, I aligned high frequency words with corresponding phonics skills. Multisensory strategies can be used to teach high frequency words. The student can practice reading the word by sight, spelling orally, and tracing the high frequency word. A sand tray, shaving cream, gel pads, and other items can be used to engage the student in his or her learning!

Third, I would like to share about literacy interventions I have planned to support students with fluency. Fluency describes reading with accuracy, speed, and expression. One of the best strategies we can use to support students and their ability to read with fluency is to model fluency in our reading. Other strategies I have found beneficial are repeated readings, readers theater, and fluency poems.

Fourth, I would like to share about how I incorporate vocabulary learning into literacy interventions. To support student reading and understanding of unknown words, students engage in a discussion of the meaning of the vocabulary words before, during, and after reading. A few activities which support vocabulary understanding include having multiple exposures, making a plan to remember the vocabulary word, and using prior knowledge to link the vocabulary knowledge to the child's schema.

I have learned to consider the areas of student strength and weakness when planning lessons to support emergent readers. I interpret student data and use the Response to Intervention framework and research and evidence-based strategies to provide instruction aligned with the Science of Reading.

As a preservice teacher at Walsh University, I feel that my reading training is preparing me to be a model in the classrooms where I do my fieldwork and to teach all students. This is because the education program at the university immerses the preservice teachers in the Science of Reading and how to use research and evidence-based strategies to teach reading to young learners. In my courses at the university, I learned how to apply the Science of Reading and use my knowledge of Scarborough's Reading Rope and the Simple View of Reading equation to guide my development and implementation of literacy lessons which meet students' needs. The application component of our literacy program at the university is a distinguishing characteristic which leads to our preparation and ability to implement what we have learned to support student learning. The opportunities I have had to analyze student data, prepare lessons based on the literacy strategies I learned in the course, and teach, reflect, and monitor student progress has prepared me for my experiences in the classroom and will support me as I begin my preclinical experience in the fall. I am looking forward to continuing to 'dig' deeper in my learning and 'grow' as a future educator while supporting all students with their literacy learning. Like Friedrich Fröbel, I believe the classroom is like a garden where teachers plant 'seeds' of knowledge and children 'grow' in their learning.

"Children are like tiny flowers; they are varied and need care, but each is beautiful alone and glorious when seen in the community of peers." (Fröbel, 1912).