PUTTING TOGETHER THE PIECES OF EFFECTIVE INSTRUCTION: THE ROLE OF STRUCTURED LITERACY

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Abstract
Following the instructional methods of structured literacy is not entirely different from jigsaw puzzle assembly. The author reflects on similarities between effective literacy instruction and experiences assembling jigsaw puzzles. Both involve sequential, cumulative instruction; varying levels of explicit instruction; and assessment. Motivation, engagement, executive function skills, and strategy use play important parts as well.

Keywords: literacy instruction, structured literacy

Introduction

On my computer monitor stand lies a puzzle piece. Just an inch and a quarter wide knob to knob, with three knobs and one notch, it is a tiny piece, mostly bluish-green with some black lines running through. At the bottom near the left knob, there is a rounded brown shape that could be the back of a person's head. The green curves at the top knob with white above, which suggests it could be a hill. Then again, the green could be the body of a dinosaur or maybe a dragon. Of course, with just one small puzzle piece and no box with a reference picture, I truly have no clue what I possess. So, why do I keep the piece? On the back, I have written the words, "Show kids where we're going." This is why the piece stays on my computer monitor year after year.

Several years ago, Dr. Laurie Curtis, now Kansas State Department of Education's Early Literacy/Dyslexia Program Manager, then a professor in elementary education at Kansas State University, presented at one of the last conferences of the Kansas Reading Association at Emporia State University. Dr. Curtis handed each member of her audience a puzzle piece and proceeded to explain to us how the brain learns and the importance of showing students where they are headed in their learning rather than doling out piece by cryptic piece and withholding the big picture. Seeing what the bigger picture is would help me know if my puzzle piece were a hill or a dinosaur or something else. Similarly, seeing how what they are learning at any given moment fits into a bigger picture of the intended instructional goals and where they are headed can help students make sense of the lesson and connect that information to prior learning. This is one reason we are encouraged to incorporate structured literacy practices in our instruction. The explicit, sequential, cumulative instruction components allow us to show students what they are learning and how that connects with what they already know and where they are going.

Structured Literacy Instruction

Emphasizing instructional practices with significant scientific research evidence of supporting the needs of struggling readers, the International Dyslexia Association (IDA) has promoted structured literacy practices as the most effective instruction for teaching students experiencing dyslexia; the IDA also deems these practices beneficial to language learners and students with broad language disabilities (2019). Structured literacy, according to the IDA, is "an approach to reading instruction where teachers carefully structure important literacy skills, concepts, and the sequence of instruction, to facilitate children's literacy learning and progress as much as possible" (IDA, 2019, p. 6). The important literacy skills referenced include phonological and orthographic skills and understanding syntax, morphology and semantics, essentially all components of Scarborough's Reading Rope (2001). The IDA (2023) developed a helpful graphic that illustrates how these skills are taught with appropriate instruction that is explicit, systematic, cumulative, highly interactive, and data driven. It is this model that I turn to when trying to explain what the science tells us about PreK-12 literacy instruction. It takes away some of the puzzling aspects about what to teach and how to teach when our students are developing literacy skills or struggling with some aspect of literacy. As I look at my family's approach to jigsaw puzzles, I realize that many connections can be made between completing a jigsaw puzzle and teaching students.

The Role of Sequential, Cumulative Instruction

I cannot imagine that many avid puzzlers started with complex puzzles of 1000 pieces or more. It is not uncommon, though, for parents and teachers to use puzzles to support fine motor and hand-eye coordination, task completion and persistence, problem-solving, sequencing, and even special vocabulary in young children (Swartz, 2018). From simple wood puzzles or those classic plastic shapes that are inserted into a ball or tub, children progress to simple jigsaws of just 25 pieces or so that create an image when assembled correctly. I remember one of the first 100-piece puzzles that I assembled and reassembled, sometimes timing myself to see if I could do it faster. I also remember when my daughter first began working on jigsaw puzzles; she would try to fit pieces together that clearly did not go together. Back then I wondered if she would ever figure out puzzles to a point where she would fall in love with them and want to complete the big ones with me. I forgot that she would need the opportunity to start small with simple puzzles with which she could experience success after some struggle and that she would need to encounter increasingly difficult yet engaging puzzles that would continue to capture her interest and challenge her as her puzzling skills improved. Like reading and writing, puzzle skill development takes time, patience, and persistence.

Our students do not walk into our classrooms with a love of books and all the skills necessary to do the hard work of learning. These skills are built gradually over time with a lot of explicit instruction in foundational literacy skills. This includes a focus on phonemic awareness which prepares students to match graphemes with phonemes as they begin decoding and encoding. Teachers introduce comprehension strategies early with modeling during read alouds and shared reading experiences. Eventually, students begin practicing comprehension strategies on their own. When teachers introduce and review the same concepts year after year, they may forget the need for providing background information or explicit instruction and modeling. I have seen teachers avoid repeating instructions or forego establishing background for fear they were boring their students, forgetting that their students did not have all the necessary pieces of information or a sense of the big picture yet. Increased focus across the country on the science of reading has led teachers back to the work of the National Reading Panel (2000). Among their findings was the effectiveness of sequential instruction in synthetic phonics programs. This and the work of Linnea Ehri (2020) and

others have pointed to the effectiveness of cumulative, sequential instruction in literacy, instruction that builds new concepts on a foundation of what is already well-established and known.

How Explicit We Need to Be Depends on Student Experience

My family and I are puzzle hoarders. If we complete a good quality puzzle with a picture we like, the puzzle is a keeper and gets worked year after year. Cats, libraries, classic Chevys, and Edward Gorey scenes are among our favorites. The first time we tackle a puzzle, we study the lines and shapes, notice unexpected patterns like colors that could be a cat or a coat or maybe water or the sky. After days of looking at the same picture to complete the puzzle the first time, my daughter has discovered the puzzle is more fun and a bit challenging the second and third time around if she completes it without the guiding picture. We work from memory, reassemble, and feel a great sense of accomplishment when we finish.

Teaching is similar. The first time we guide students through a concept, most of them need the picture, the roadmap to where they are going. Each of the small pieces of information we give students with each lesson in a unit can be too abstract on their own without a clear sense of where the learning is going. However, once they have some experience, we can begin to withhold the picture and let students discover for themselves where they are headed, now that they have some experience getting there with guidance. This is the sequential instruction found within structured literacy, often described as a gradual release of responsibility (Webb et al., 2019). A gradual release of responsibility means teachers begin by modeling a skill (I do) and then move to guided practice in which students practice the skill with partners, small groups, or the teacher (we do) before students use the skill independently (you do).

Assessment Drives It All

How did I know when my daughter was ready for more complex puzzles? How did I know she was ready to try completing puzzles without a picture to reference? I observed her work, and I listened to her. She shared with me that she wanted an additional challenge in reworking a familiar puzzle without the picture, and she completed several this way. This year when I received a new Springbok library puzzle (with cats), the image and shapes, though new, had a certain familiarity to her. She declared she did not want to use the lid, and we were off looking for patterns, colors, lines, and cats.

Knowing when our students are ready for more challenging independent work comes from similar assessment practices; structured literacy instruction is, after all, data driven. We observe students' progress and see how much they can progress independently from that "We Do" stage of instruction. We conference with students, having them verbalize strategies they are employing since so much comprehension work happens in the brain where we cannot see it. Assessments, formal and informal, are important for that stage when we become concerned that we are boring our students by providing them with unnecessary information, too. Assessments allow us to identify what pieces students hold in their hands (or maybe, metaphorically, what pieces to remind students that they have left in their desks). Through effective assessments, we can determine when students understand the bigger picture of where they are going and when they need more guidance and information.

Motivational Elements Still Matter

In the month before Christmas, my family decided to put together a lovely puzzle of two cabins in the woods, with a lot of trees, mountains, and sky in the background and a lot of water and grass in the foreground. The pieces were tiny and fairly traditionally shaped. There were elements of interest, but the deer, dog, and turkeys were each just a piece or two in size. We could not always

distinguish the water from the sky or the trees from the grass. There were no books, no cats, and my patience with the puzzle was limited. One thing that kept me going was that my daughter wanted to finish the puzzle. I had her company and help through most of the project. That did not keep me from declaring on multiple occasions, "I hate this puzzle!" Another thing that kept me going was the promise of the next puzzle, a Christmas scene in a 1950s downtown with classic Chevy cars. We had completed this one the year before, and I knew it would be fun. Even with the difficult pavement and snow-speckled sky, it promised to engage with windows in the buildings, Santa on the corner, people peering in shops, and garlands strung over the street. We successfully finished the difficult woodland scene and relished in our success; then we gleefully took it apart and grabbed the next box, our reward for a job well done.

I am fortunate to not have to complete puzzles alone. My daughter and husband share my love of puzzles and enjoy puzzling with me. As we work, we trade perspectives and alternate working from the top or bottom, organizing the pieces on an old baking sheet or the puzzle board as we go. We have learned the strategies of puzzling. We place the puzzle board on the dining room table where we can have good daylight and decent overhead lighting at night. We are always proud when we finally get the last piece in. It was especially satisfying to finish a puzzle just before winter vacation officially ended, meaning we did not have an unfinished puzzle looming in the background as we shifted our focus to other tasks.

Teaching students to be literate is not as simple as making sure they have the skills to decode, encode, and comprehend language. Gough and Tunmer (1986) proposed in their Simple View of Reading that skilled reading is the product of decoding and comprehension. Because skilled reading is a product, it requires both solid decoding and solid comprehending skills; without full development of skills in one or both areas, students do not fully develop the ability to read. Sometimes the Simple View of Reading causes teachers to oversimplify the process of learning to read and, in turn, the process of teaching reading. In their model of an Active View of Reading, Duke and Cartwright (2021) stressed the role of motivation and engagement, executive function skills, and strategies used when students are learning to read. These are not separate but integral pieces of literacy development throughout their schooling. When teaching our students to read and navigate ever more difficult texts, we also teach strategies that support this navigation.

In their model of an Active View of Reading, Duke and Cartwright (2021) stressed the role of motivation and engagement, executive function skills, and strategies used when students are learning to read.

Not all strategies work for all students in all contexts. We introduce strategies for navigating informational text, which are different from strategies for constructing meaning from narrative text. Some students take to some strategies better than others, and we help our students identify which ones work and help them make the most sense of the pieces in front of them. Sometimes, we provide support in the area of time management so that students do not become too overwhelmed with the tasks at hand, or we help students identify when it is time to abandon a book that is just not a good fit for independent reading. We help facilitate book clubs and literature circles so students can share the reading experience with their peers. As teachers, we cannot monitor all of the progress students are making as they employ strategies, so we teach them to independently monitor their understanding and employment of strategies. Knowing that not all students have the same level of skills when they walk into our classrooms, we identify texts for which they may have some background knowledge or connection that would motivate them to dive deeper, even when the text is challenging. We celebrate their accomplishments to keep moving them forward, spurring them to set higher goals for themselves and to work to achieve those goals.

Conclusion

While learning to read and solving jigsaw puzzles may share some similarities, as educators, we recognize that teaching reading should not be a puzzling prospect. Structured literacy practices guide our planning as we assess students' strengths and needs and deliver explicit, sequential, and cumulative instruction that is highly interactive and engaging for our students. We recognize that teaching reading is a matter of teaching students how to look at the big picture and put the pieces together. What we do is not easy, but each time a student lights up, revealing they understand how those pieces fit together, our work is validated. It gets even better when students choose to challenge themselves and elevate their personal goals, similar to the gratification I get from putting together new puzzles or reassembling old ones.

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