



Using Phonemic Awareness to Help Jade Crack the Code

by Karen Deighan

The reading specialist sat down with Jade and presented her with an early reader. The title of the book was *A Farm*. Each page had two words on it, e.g., a horse, a cow, a pig, etc. The reading specialist talked with Jade about the pictures on the cover of the book and Jade was able to identify the pig, the horse, and the cow. She called the barn “red.” The reading specialist picked up the book and handed it to Jade. Jade opened the book, looked up, and in her monotone voice said, “Can’t read.” They proceeded to do a walk-through of the book. Jade could identify most of the farm animals in the book. She would look at a picture of an animal, identify it, and look up. She was then shown the corresponding printed word for each animal on the page. Jade pointed out the word “A” on each page and then repeated the names of the animals. At 10 years old, Jade was *reading* her first book.

Shortly after Jade’s experience with her first book, she began reaching milestones in phonemic awareness and as a result began to crack the code. She is an ELL student with a complex medical history, including a diagnosis of triple X syndrome, pulmonary hypertension, attention deficit hyperactivity disorder, and failure to thrive culminating in a finding of mild intellectual disability (ID). Girls with triple X syndrome, also known as trisomy X, have an additional X chromosome in each of their cells. As a result, they have an increased risk of learning disabilities and speech and language delays. Jade was adopted at the age of 5. At that time, she had very little language and it was hypothesized, as indicated in her neuropsychological evaluation, that she may not have language pathways in the brain. Very little is known about how she spent her first five years of life. In spite of her literary challenges, Jade is learning to read.

Jade began her work with the reading specialist midway through her third year of school. At that time, she could consistently identify and name all 26 letters of the alphabet. Although she could orally produce the sounds of all of the letters, she was not consistent in doing so; she did not demonstrate any phonemic awareness skills. Jade worked with the reading specialist three times per week. She was in a group of three students using the structured reading program Wilson Foundations. Jade also received individualized tutoring from the reading specialist as well as speech and occupational therapy services twice a week.

Reading Instruction

The National Reading Panel (2000) outlines five critical components of reading instruction: oral language and vocabulary, phonological awareness, phonics and word recognition, fluency, and comprehension. Historically, students with ID were taught to read using sight word recognition (Allor, Mathes, Champlin, & Cheatham, 2009). “The structure of phonological processing for school-age children with a mild intellectual disability resembles that for children with typical development” (Barker, Sevcik, Morris, & Ronski, 2013, p. 377). Phonological processing skills are important skills for word and nonword identification. “Phonological processing skills are correlated with reading performance for students with intellectual disabilities” (Gabig, 2010, p. 84).

Phonemic awareness is an indicator of future reading success (Adams, 1990). Adams recognizes five levels of phonemics awareness:

- the ability to hear rhymes and alliterations;
- the ability to do oddity tasks;
- the ability to blend sounds into words;
- the ability to segment words orally into phonemes; and
- the ability to manipulate phonemes by deleting or substituting the initial consonants of words.

Perceiving Rhymes. According to Adams (1990), the first level of phonemic awareness is an awareness of rhyme. Students who are able to perceive rhymes are better able to recognize patterns in words. Uhry and Shepherd (1993) postulate that rhyming is the easiest of the phonemic awareness tasks.

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When Jade first began working with the reading specialist, she was unable to recognize whether two words did rhyme, nor could she produce a rhyming word for a given word. Since rhyming is a precursor to reading, a significant amount of time was spent explicitly teaching Jade an awareness of rhyme. Stories, nursery rhymes, songs, and games using a multisensory approach were used to give Jade a sense of rhyme. After working with the reading specialist for six months, Jade was not able to produce a rhyme for given a word, nor could she orally distinguish if two words rhymed. However, when given three pictures of words with two of them rhyming,

she could consistently choose the two rhyming words. For example, when shown pictures of a cat, a bat, and a house and orally given the label for each word, she would choose cat and bat. Jade was not native to English and as a result missed early exposure to rhyme. There is also a discrepancy between her expressive and receptive language. She is an English Language Learner and has a limited vocabulary. Any of these factors could have contributed to Jade's inability to produce a rhyming word for a given word.

Doing Oddity Tasks. The second level of phonemic awareness is the ability to do oddity tasks, such as comparing and contrasting words for similarities and differences (Adams, 1990). For example, the teacher presents the student with three words—cat, man, cake—and then asks the student to tell which word starts with a different sound. This task was taught to Jade using picture cards. Jade would hear the word and see the picture simultaneously. She was able to learn and eventually do this task independently within the scope of her learned vocabulary.

Blending Words. The ability to orally blend sounds into words is the third level of phonemic awareness (Adams, 1990). For example, the student listens to the sounds of a word—/c/-/a/-/t/—and then is instructed to put the parts together to make a whole word—cat. This activity was repeatedly modeled for Jade. Also, a multisensory component was included; pictures of the words, finger tapping, and physical objects, such as blocks, were used to help represent the sounds in the words. Jade was able to successfully blend one-syllable *cvc* words, such as sit, cab, bet, etc.

Segmenting Words. Adams (1990) lists the fourth level of phonemic awareness as the ability to segment words. The student is asked what sounds they hear in a word and they respond with those sounds. For example, the student will be given the word “cat” and asked to segment the word. The student will respond /c/-/a/-/t/. Jade was taught this activity using Elkonin boxes and pictures and using her fingers to tap the sounds of the word. After much instruction, modeling, and practice, Jade was able to successfully segment one-syllable *cvc* words, such as cat, tub, man, etc. Jade also used this strategy to decode unknown words in her reading.

Manipulating Phonemes. The final and fifth level of phonemic awareness is the ability to manipulate phonemes in words (Adams, 1990). This task was very difficult for Jade. She has been receiving speech and language service for five years and still cannot understand such words as “before,” “after,” “beginning,” and “ending.” One reason she is unable to manipulate the phonemes in the words is because she does not understand positional words. The reading specialist did use a multisensory approach to teach this level of phonemic awareness. Although Jade did not grasp this, it doesn't mean she cannot learn how to manipulate phonemes. This activity was taught in the last month of working with Jade and she needs a lot of reteaching and practice to learn something new.

Reading Instruction for Students with Intellectual Disabilities (ID)

There has been little research in using phonological awareness and word recognition to teach children with intellectual disabilities (ID) to read (Barker et al., 2013). Additional research is warranted to identify effective reading strategies and best practices for students with intellectual

disabilities (Allor, Mathes, Roberts, Cheatham, & Otaiba, 2014). It is challenging to teach students with ID to read due to language deficits, behavior issues, and poor memory (Allor et al., 2009). Allor et al. (2009) outline techniques for teaching early reading skills to students with intellectual disabilities. They include teaching oral language, phonological awareness focusing on blending and segmenting, teaching phonics and word recognition, fluency, and comprehension (p. 364).

Oral Language and Vocabulary. Allor et al. (2009) suggest reading aloud to foster oral language and vocabulary development. Jade's receptive vocabulary is stronger than her expressive vocabulary. Each day that Jade worked with the reading specialist, she listened to a book read aloud to her. Although Jade enjoyed listening to stories, she could sit and pay attention for only one story.

Blending and Segmenting. Students with ID will benefit from systematic and explicit instruction in blending and segmenting (Allor et. al., 2009). They need to be taught to distinguish both the syllables in words and the words in sentences. They are also taught to blend and segment sounds in words. It is important to make the activities meaningful and to be careful to increase the difficulty and intensity of the activity at the student's pace. Blending and segmenting words was a crucial component of Jade's reading program. She worked on this daily for three months before she was able to successfully blend three sounds into a *cvc* word. When Jade first began blending words, she did have some difficulty saying the word as a whole. For example, when she was blending the sounds in the word "dog," she had trouble saying the whole word "dog." She would simply repeat the sounds. After a lot of practice and modeling, she did catch on. It appeared as though Jade thought it was a game and would get excited when she could say the whole word.

Phonics and Word Recognition. Letter-sound correspondence and reading high-frequency words should be a focus of reading for students with ID (Allor et. al., 2009). Each day of the school week, Jade was drilled on the sounds of the alphabet. She was shown a card depicting the letter and keyword picture and she would say the letter name, name of the picture, and the sound. Jade was also explicitly taught sight words. It took Jade two months to learn to read the word "the." By the end of the six months, Jade could instantly read the first 10 of the first 100 Fry Words.

It is crucial for educators to make word recognition activities meaningful to students (Allor et al., 2009). The reading specialist working with Jade used individual words in the decodable texts to reinforce word recognition. The words/sentences from the book were written on sentence strips and then cut apart. Jade would be asked to read the words one at a time in the correct order in the sentence, out of order, and in isolation.

After this activity, Jade would read the corresponding decodable book. For example, Jade was taught to read words in isolation (the, fat, cat, sat, on, the, mat), in context (The fat cat sat on the mat) and out of order (the mat sat fat on the cat). Initially, Jade had no concept that the sentence "The mat sat fat on the cat" did not make sense. This was an activity that was introduced to Jade

much later in her instruction and revisited often. Once she understood it, she had fun moving the words around and saying them in a mixed-up order.

Fluency. Fluency is the speed at which students recognize whole words (Allor et al., 2009). When working on fluency, students can be encouraged to read the fast way, they can read in unison with the teacher, and/or repeatedly read the text. Jade continues to work on both decoding and fluency. Prepositions such as “for” and “to” are not part of Jade’s expressive vocabulary. Therefore, she has had difficulty reading these words and this impacts her fluency.

Comprehension. Comprehension is the ability to make meaning of the text (Allor, et al., 2009). The goal of reading is to make sense of the text and to understand the meaning. Jade worked hard at decoding the text and, as a result, her comprehension of the story was impacted. Acting out the story with props became a meaningful activity for her. This helped her to understand the story, evidenced through her retelling of it.

Conclusion

It can be challenging to teach students with ID to read. Historically, the focus of their reading program has been on memorizing words. In 2015, Jade’s neuropsychologist recommended that due to her slow learning progress, she would benefit from a reading program that taught simple sight words. There was no mention of phonemic awareness in the report. Also, the report stated that Jade’s language comprehension was an area of weakness, which suggested a significant language disability consistent with a cognitive disability rather than just her English Language Learner status.

The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and anecdotal records were used to track Jade’s progress. Due to Jade’s inconsistent progress, observation was instrumental in this tracking effort. Three months after working with the reading specialist, Jade was able to look at a *cvc* word, say the sounds, and fluently blend them into a word. Four months after working with the reading specialist, Jade self-corrected for the first time when reading. She was reading a book with the word “Dad” in it and she read “Dan.” She immediately self-corrected and said, “Dad.” Five months after beginning work with the reading specialist, Jade consistently used the finger-tapping method when decoding unknown words. She didn’t have to be reminded to use it.

Six months into her instruction, when reading an easy reader Jade came across a word that she did not know, realized she didn’t know it, and asked, “What does ‘huff’ mean?” The reading specialist acted out the word “huff.” She also helped Jade make a connection between the word “huff” and the story *The Three Little Pigs*. Jade had recently done a book study on this story. From then on, when Jade read the word “huff,” she would pause and say, “Huff and puff and blow your house in.”

Jade was taught phonemic awareness carefully and explicitly based on the research of Allor et al. (2009). She made significant growth in her ability to blend and segment words. She also learned

and used strategies for decoding. Jade has made progress and there is no reason to believe that she will not continue to learn to read more difficult text. These findings are based on one student and the monitoring of a short duration of time. However, it is clear, based on recent research, that this student with ID did benefit from phonemic awareness instruction and that it is helping her learn to read.

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