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Send out your light and your truth! Let them guide me. Psalm 43:3

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God's Design and Phonemic Awareness: What is phonemic awareness, what is phonics, and what does God have to do with it?

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What is phonemic awareness and how is it different from phonics? Too many excellent educators struggle with these questions. A typical definition of phonemic awareness is the ability to manipulate and understand *spoken* sounds. The minute you bring any written *print* into the lesson, you begin teaching phonics (sound/letter correspondence). The authors have found that educators quickly grasp the difference when we explain the phonemic and phonic theories using the mother/infant scenario.

A young mother leans over her son's high chair and begins to feed him a spoonful of slimy, green peas. Half of the mixture ends up on the outside of his mouth and down his bib. This feeding ritual continues until the mom accidentally spoons him some mashed, orange peaches. The young boy's face breaks into a smile and his mouth miraculously opens up wider, ready for the next bite. Realizing her mistake, she quickly scoops the peas and attempts to plop them in her baby boy's mouth. He says, "Nnnnnnn" and closes his mouth. The mom's eyes widen and she exclaims, "Did you say nnnno?" "Are you trying to tell me no?" Laughter fills her eyes when she realizes her brilliant son is already using sounds to express himself. "Okay, no you don't want the peas. How about some more peaches?"

This example is a typical scene of a mom dealing with the first sounds of her child. Now, allow us to change the ending so you can see how she reacts by deviating from phonemic awareness and enters into the world of phonics.

...He says, "Nnnnnnnn" and closes his mouth. The mom's eyes widen and she quickly runs to the refrigerator and grabs the magnetic letter 'n'. "Is this the sound you were trying to make, darling?" The child looks at his mom. "Darling, this is the letter n. It is the symbol to the sound you just made," says the mother in her sweetest voice. "Every

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time I hold up this letter I want you to make the nnn so..." The mother's words are cut short because her young son is crying.

The second scenario seems silly; yet, this 'silly scene' takes place in thousands of primary classrooms around our globe. Sometimes it is necessary just to play with the sounds and ignore the squiggly marks that man created to go with them.

Theoretical Support

God *spoke* creation into existence. "Let there be light"; "Let there be an expanse between the waters to separate water from water"; and "Let the water under the sky be gathered to one place, and let dry ground appear" (Genesis 1:3a, 6a, & 9a, New International Version). God did not write out the directions and send His angel messengers to complete His directions. There is power in the spoken word.

Unless you are born deaf, you learn about your world through the spoken word. You do not leave the hospital and immediately register your child for 'learning to hear and understand sounds' classes. God has wired our brains immediately to begin hearing sounds and finding ways to manipulate them. Chomsky, a renowned researcher in the field of language acquisition, unknowingly agrees with God when he states that we are equipped with a language acquisition device (Chomsky, 1965). God has outfitted each of us to learn language. It is your parents, or caregivers, that fine-tune your ability to manipulate sounds. A child born in Korea and adopted in the United States is not 'hard-wired' to learn Korean. He will learn to manipulate the sounds based on the support of the people around him.

Babies naturally play with sounds by babbling the consonants and vowels they hear in their environment. Then, at about one year of age, they begin to string those sounds together to make their first word(s). A two year old begins making phrases and then sentences (Tompkins,

2006). The sum of their play with sounds becomes the basis for emergent literacy without their ever entering a formal classroom setting. This informal 'sound training' is how God created us. Sadly enough, though, children will also fail to learn to manipulate sounds due to lack of support.

Shirley Brice Heath spent 10 years living among two groups of poor communities. Her main goal was to discover why these children were often ill-prepared to meet the challenges of school and often become school "leavers." The following quotation is a powerful reminder that not all children come to school with the same "sound training":

Even in contexts where the baby's utterances can be easily linked to objects or events, adults do not acknowledge these utterances as labels. "Mu mu" screamed by a twelve-month old at the sight of a bottle on the kitchen table is not interpreted as *milk*. The adult, already in the process of getting milk for the bottle, responds: "Okay, I'm lookn', hush yo' mouth all that fuss. Aint' no use hollerin'." Adults see no need for a baby or child to have to tell them what to do or even what the infant wants (1983, p. 76).

Too often we assume that all children have had the same opportunities to interact with sounds prior to coming to school; therefore, children are ready to have letters thrown at them while also learning to manipulate sounds. Thousands of children sit helplessly overwhelmed in classrooms by well-meaning educators giving them solid food (phonics) when they still don't have strong teeth (phonemic awareness).

Phonemic awareness is the basis for a child's literacy development and is one of the best indicators of whether a child will be a successful reader in the early elementary grades (National Reading Panel, 2000; Adams, 1990; Castiglioni-Spalten & Ehri, 2003; Cunningham, 1990). Frost (1998) even argues that phonological skills are central to adult reading due to the link between

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spoken words and their ensuing meaning. These findings are substantiated every time a reader sub vocalizes (begins reading aloud to yourself). Think of the last time you worked to decipher an unknown word. Odds are you didn't just stare at it until it made sense to you; you probably began saying its recognizable sounds until your 'ear' recognized a pattern and registered that sound pattern with your stored memories.

Shaywitz's (2003) longitudinal study regarding dyslexic readers provides a clear image of the importance of teaching phonological awareness. Using a Magnetic Resonance Imaging (MRI) machine, Shaywitz has been able to map the neurological irregularity of Dyslexia to the phonological processing area of the brain. Other language processes are unaffected, including semantics, syntax, and discourse. Similarly, listening is unaffected by dyslexia, though speaking can be affected as the impairment interferes with the differentiation and/or acquisition of phonemes. This neurological breakdown can be likened to the implementation of an imperfectly conceived service in the operating system of a computer: when words are read, the service fails to connect letters and phonemes, or does so at a rate so slow as to interfere with the downstream processes. Processing language in a dyslexic brain is similar to searching a computer database without indices: the path from the stimulus to the needed results is not direct and immediate, but circuitous and lengthy (or simply unavailable).

Teaching and Assessing Phonemic Awareness

Phonemic awareness can be developed by providing a language-rich environment beginning at birth. Explicit and systematic phonics instruction builds upon a child's ability to manipulate the spoken word. The amount of instructional time relegated for phonemic awareness to be successful is recommended to be "no more than 20 hours" (Armbruster, Lehr, & Osborn,

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2003, p. 9) each school year. Teachers need to understand the difference between phonemic awareness and phonics in order to teach these concepts separately and effectively.

The ability to manipulate sounds is multi-faceted and includes: rhyming, segmentation, blending, and the isolation of sounds (Armbruster et al, 2003). All of these categories require explicit assessment and instruction. While phonemic awareness instruction is often relegated to the primary grades, the authors would like to caution educators to never forget this God-created foundation skill is often missing in adolescent and adult learners. These learners desperately need an acute educator to perceive and remediate their inability to hear and/or manipulate sounds: “Adolescents have the right to be taught by a caring, competent, highly-qualified teacher” (Bass, Dasinger, Elish-Piper, Matthews, & Risko, 2008, p.xviii).

Rhyming

Assessment of phonemic awareness involves listening to and observing children. Circle time is one of the best ways to use an observational checklist to assess rhyming (see Figure 1 for assessment examples). Primary-aged children often gather together at the beginning of the school day to sing, recite, and talk with the teacher. Rhymes and alliteration can be used to develop an awareness of the sounds of language during this time (Cooter, R. & Reutzell, D., 2005). An effective teacher carefully captures a student's ability to rhyme by gathering data and then offering small group instruction to struggling children. Rhyming activities include individual or group activities in which a child matches pictures or objects that rhyme. Another activity that has been especially helpful when dealing with rhyming sounds involves the teacher saying a word, such as cat, and then asking the student to change the beginning sound to make a word that rhymes. This simple activity encourages auditory acuity which in turn builds phonemic awareness.

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Segmentation and Blending

Segmentation and blending skills require children to manipulate a spoken word by either dividing (segmenting) it into its component sounds or combining (blending) isolated sounds to make a word. Many children come to school with the ability to blend and segment sounds; however, countless, and often silent, children have no concept of these skills.

The most appropriate way to assess and remediate segmentation and blending is through individual assessment and small group instruction. The authors have found that the first few weeks of school are the best time to assess skills, because the children are often engaged in whole group 'getting to know you' activities which allow the teacher to spend a few minutes assessing individual students. Segmentation assessment is comprised of simply telling the child you are going to say a word 'fast' and you want him/her to stretch it out into its distinct sounds. You must always provide an example. ("For example, if I said 'dog' you would say /d/ /o/ /g/.") This assessment should include two, three, and four syllable words. Blending assessment reverses this process with the teacher stretching each word out and asking the child to blend the sounds together to create a word.

Isolation of Sounds

What do you do when you are presented with a new word? Read the following sentence and pay careful attention to your reading behaviors: Jesus is the ultimate panpharmacon.¹

Odds are you encountered the word "panpharmacon" for the first time and had to go back and re-read it. In order to 'attack' this word you probably began to break it apart into discernable parts (segmentation) or isolate specific sounds (like the 'ph') in order to 'make sense' of this new word. Isolation of specific sounds in a word is another way to assess and teach phonemic

¹ Yes, Jesus is the only 'medicine for all diseases.'

awareness. An example of this strategy involves asking children to state the first or last sound they hear in a specific word. You should begin with the initial and ending sounds and then move to the more difficult median sounds.

A fun phonemic isolation game that can be played by parents and teachers is called “in my father’s grocery store.” The game begins by the adult saying, “In my father’s grocery store are many things...I am thinking of something that starts with the sound /p/.” The child then begins to guess items that begin with that sound. Pizza, popcorn, peanuts, would be a few correct guesses. If the child says, “banana” you simply say, “p..p..p, is the sound you are looking for, you said b..b...b, try again.” The children will play this game for hours without realizing they are also preparing for future reading and spelling gains. This game can also be seamlessly moved into the phonics arena by saying, “In my father’s grocery store are many things...I am thinking of something that starts with the letter ‘p’.”

Remember, although God has created us to hear sounds, it is adults and the environment that prepare each child to manipulate the distinct sounds of the culture. Educators must be prepared to *assess* and *remediate* the phonemic awareness levels of each child through purposeful and explicit teaching- and assessment-driven reflective practice.

Conclusion

God used the spoken word to bring everything into existence. He created our brain with a language acquisition device. However, parents and caregivers use oral language to bring life and meaning to children’s surroundings. Educators must be armed and ready to assess the phonemic awareness strengths and needs of their students and be prepared to build upon their strengths while addressing their needs. Phonemic awareness is a “big deal” because God intended it to be the building block of all interactions.

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Figure 1. Phonemic Awareness Assessment Examples

Rhyming Checklist

Name	8-29-07	9-1-07	9-3-07	9-4-07	9-5-07
Susie Frank	Cat/bat	Hit/kit	N/O	Hop/stop	Hat/cat
Jill Jankens	N/O	Hit/dog??	Sad/sing??	Hop/happy?	Hat/hit ?
Ray Smith	N/O	N/O	N/O?????	'very shy'??	Hat/hi ?
Connie Elsie	Cat/hat	Hit/spit	Sad/glad	Hop/hopping?	Hat/bat

N/O = not observed on that day

?=spend some time with 1-on-1

Segmenting and Blending Assessment

Segmenting: Teacher says, "I am going to say a word fast and I would like you to stretch it out, like a rubber band, into its small sounds."

"For example, dog would be /d/ /o/ /g/."

1. Hi _____
2. By _____
3. Cat _____
4. Mom _____
5. Frog _____

Blending: Teacher says, "I am going to stretch a word out into its smaller sounds and I want you to blend them all together and say the word."

"For example, /s/ /a/ /d/ would be 'sad'."

1. /a/ /t/ _____
2. /g/ /o/ _____
3. /d/ /a/ /d/ _____
4. /s/ /t/ /o/ /p/ _____
5. /h/ /e/ /l/ /p/ _____

Isolation of Sounds

Teacher says, "I am going to read you some words and I would like you to tell me the first sound you hear. For example if I say 'dad' you would say /d/."

Mom _____ Stop _____ Baby _____ Go _____

Teacher says, "I am going to read you some words and I would like you to tell me the last sound you hear. For example if I say 'stop' you would say /p/."

No _____ hi _____ dad _____ friend _____