The Importance of Phonemic Awareness Instruction for African American Students

by Ramona T. Pittman, Marianne Rice, Esther Garza, and Myriam J. Guerra

The National Reading Panel (2000) identified phonemic awareness as one of the pivotal pillars in teaching students to read. Over two decades have passed, and children still experience difficulty with learning to read. This is especially true for many African American students who are more likely to not reach proficiency on literacy measures, including the National Assessment of Education Progress (NAEP, 2019) and state measures (e.g., State of Texas Assessment of Academic Readiness, Texas Education Agency, 2022 and California's Assessment of Performance and Progress, California Department of Education, 2022).

Research has shown that educator preparation programs may not adequately prepare teachers to teach students to read (Binks-Cantrell et al., 2012; Pittman et al., 2020), although decades of research has confirmed that the science of reading is a body of knowledge that informs how proficient reading and writing develops, how reading and writing should be assessed and taught, and what happens when a student does not learn to read (Moats, 2020; *The Reading League*, 2022). Science of reading knowledge, therefore, can increase the literacy outcomes of students.

Because of the high percentage of students who are not reading proficiently, the science of reading has gained considerable attention in recent years as school districts, educator preparation programs, and content providers move away from Balanced Literacy toward science of reading aligned instruction.

When learning about the science of reading, teachers come to understand the structure of the English language, so they can help students learn to decode and encode (spell). In order to be successful with both of these skills, one must become aware of individual sounds (phonemes) in words. Phonemic awareness is important because it facilitates students being able to decode and encode using the alphabetic principle of mapping phonemes to letters or letter combinations (graphemes). When spelling without automaticity, for example, one must consciously segment each phoneme in the word and map it to the correct grapheme, as would happen when spelling the pseudoword *vust*. If a student was asked to read the word *vust*, the student must be able to attach a phoneme to each grapheme and then blend the phonemes together to decode the word. The ability to understand and teach the structure of the English language at the phoneme level is crucial when students are learning to read and spell.

Phonemic Awareness Instruction

Phonemic awareness is the ability to blend, segment, and manipulate individual speech sounds, or phonemes, in words (Ehri, 2022; Mesmer & Kambach, 2022). A phoneme is the smallest unit of speech sound that changes the meaning of a word (Uhry, 2013); if the /b/ in *bat* was changed to /r/, the new word would be *rat*, thus changing the meaning. Students with good phonemic awareness skills will notice that *mat* (/m/ /a/ /t/), *shut* (/sh/ /u/ /t/), *church* (/ch/ /ur/ /ch/), and *through* (/th/ /r/ /oo/) are composed of three individual phonemes regardless of how many letters are present in the word.

Phonemic awareness falls under the umbrella of phonological awareness. Phonological awareness is understanding how spoken language can be broken down and manipulated and includes (a) rhyming and alliteration, (b) sentence segmentation, (c) blending and segmenting syllables, (d) blending and segmenting onset and rime, and (e) blending, segmenting, and manipulating phonemes (i.e., phonemic awareness; Ehri, 2001). The skills listed before phonemic awareness deal with larger chunks of spoken language and progress from the word level to the syllable level and then to the level of individual phonemes. Stu-

dents who are able to manipulate phonemes in words are more likely to be successful at decoding and spelling, as phonemic awareness is a predictor of later reading success (Erbeli, 2018; Melby-Lervag et al; 2012). Those who cannot manipulate phonemes have difficulty decoding and spelling (Ehri et al., 2001; Ehri, 2020). This is especially true for children learning in a language or dialect that is different from what they experience at home.

Given that many students enter school with limited phonemic awareness skills (Hatcher, et al., 2004), it is necessary for teachers to provide explicit phonemic awareness instruction, as it serves as a foundation for solid decoding ability (Brady, 2020). In a recent meta-analysis, Rice et al. (2022) found that phonemic awareness instruction was shown to be effective in improving the phonemic awareness skills of students on all phonemic awareness tasks (e.g., identification, isolation, blending, and segmenting) in preschool and first grade. Rice et al. (2022) also found that phonemic awareness instruction was effective regardless of the size of the instructional group (e.g., small group, whole class), who provided the instruction (e.g., teachers, parents, or computer programs), and whether the students were at risk for reading difficulties or were English language learners.

English has a relatively opaque writing system, meaning there is not always a 1:1 correspondence between letters and sounds. For example, one has to learn whether the consonant digraph *th* is going to be pronounced as /th/ in *bath* (unvoiced sound, when the vocal cords do not vibrate) or /TH/ in *bathe* (voiced sound, when vocal cords vibrate). Phonemic awareness instruction is pivotal in ensuring that students can notice the distinct sounds between /th/ and /TH/ or that the final sounds in *magi**c**, stoma**ch**, plan**k**,* and *sti**ck*** are the same.

AAE is a variety of English that is rule-governed and “has a set of phonological (system of sounds), morphological (system of structure of words and relationship among words), syntactic (system of sentence structure), semantic (system of meaning), and lexical patterns (structural organization of vocabulary items and other information)”.

Russak (2013) noted that if students are unable to perform phonological awareness tasks in their home language, then these tasks would be difficult when learning other languages as well. An additional problem is that familiar phonemes such as consonant digraphs /sh/, /th/, and /wh/ may not exist in the language that the student is learning (Russak, 2013).

Phonemic Awareness and African American Students

In the U.S., African Americans account for about 13% of the population. Of this 13%, approximately 80% speak a dialect of English called African American English (AAE; Rickford, 1999). AAE is a variety of English that is rule-governed and “has a set of phonological (system of sounds), morphological (system of structure of words and relationship among words), syntactic (system of sentence structure), semantic (system of meaning), and lexical patterns (structural organization of vocabulary items and other information)” (Green, 2002, p. 1).

According to Green (2011), however, when it comes to oral language, speakers can be on various levels of a continuum of points A-D, where point A represents *general American English* (GAE; Washington & Seidenberg, 2022), the language expected to be spoken in school settings, and point D represents AAE, the heritage language of many African Americans. Depending upon the audience, some students are able to “style shift” (Wolfram & Schilling 2015) from each point effortlessly, while others may have difficulty moving along the continuum between AAE and GAE. Labov (1995) questioned whether AAE could be a possible source of reading difficulty for African American students style shifting to GAE. Charity et al. (2004) argued that many teachers set low expectations for African American students based upon the language they speak, when instead, each person’s language should be valued as a part of their heritage. AAE speakers are linguistically diverse, as they both understand AAE and style shift to GAE when using expressive language (speaking and writing) or receptive language (listening and reading). Few studies have focused specifically on phonemic awareness instruction with AAE speakers.

With a focus on the importance of phonemic awareness, educators must become familiar with AAE so they will not assume that students who speak AAE have phonological difficulties. This viewpoint causes students to be viewed as “less than,” when in fact, they may

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have phonological differences (Delpit, 2006). It is important, therefore, to understand the phonological features of AAE since it plays such a key role in understanding the language structure of English. The phonological features of AAE that are most often used include the following:

- final consonant blend reduction→pass (past), dess (desk), mine (mind)
- unvoiced /th/→tin (thin), teef (teeth)
- voiced /*TH*/→dat (that), breave (breathe)
- reduction of the final *r*→poe (pour)
- reduction of middle and final *l*→hep (help), pia (pill)
- reduction of final *g* in gerunds→dancin (dancing)
- three letter initial consonant blend *str*→ skraw (straw)

(For a complete list, see Rickford [1999] and Green [2002].)

For students who speak AAE, a discrepancy exists between the language they use and the language that is expected to be used in school. For example, a teacher may read a book that features the word *four*. If the student is familiar with the pronunciation *foe* but not *four*, the student's comprehension may be compromised due to the difference in the pronunciations of the word. It is important for teachers to understand these features so they can better understand style shifting for formal classroom instruction, the AAE-related pronunciations that may appear in their students' spellings (Pittman et al., 2014), and how phonological spelling is derived from sounds heard in words (Read, 1971; Treiman, 2018).

Many students who speak languages other than English participate in emergent bilingual classes. These classes often teach students how to speak, read, and write in GAE. African American speakers are not given similar opportunities because many educators remain either unaware of AAE (Pittman, 2017) or think that since AAE is English, these students are not bilingual/bidialectal. If teachers remain unaware, they cannot provide instruction to help students style shift to GAE, while at the same time, acknowledge and appreciate their dialect.

Phonemic awareness instruction will be especially important for students who are AAE speakers, especially when they begin to blend and segment words using GAE. Teachers will need to note the number of phonemes in a word as well as how the student pronounces them. For example, if showing a picture of a *tooth* and asking how many phonemes the word has, a student responding that it has three phonemes is correct. When asked to segment the word into its three phonemes, the student might identify the phonemes as /t/ /oo/ /f/ instead of /t/ /oo/ /th/. The teacher has to draw attention to these phonemes so that the mismatch between the phonemes does not impede the student's spelling or decoding. Again, this is a phonological difference and not a phonological deficit.

Practical Applications

In this section, we suggest modifications of three widely used phonemic awareness tasks to focus specifically on the phonology of AAE speakers.

Elkonin sound boxes. One of the most prevalent phonemic awareness tasks is sound boxes, where students move a counter to a drawn box for each phoneme in the word. For example, if the word is *test*, the student would move four counters into a box, one for each phoneme, while saying each phoneme out loud. A teacher might notice a student moves and says only three phonemes, and because she knows that some AAE speakers reduce the final phoneme /t/ and pronounce the word as *tes*, the teacher can then use the Elkonin box task to instruct that in GAE, there are four phonemes in *test*. Students can eventually use counters featuring letters to build alphabetic knowledge as well as phoneme awareness. Keesey et al. (2015) found a positive relationship

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between sound box instruction, segmentation skills, and letter correspondences.

Mirrors. Mirrors are used to notice mouth movements in alphabetics instruction, and they are particularly useful for AAE speakers. The students can see how their tongue, teeth, and/or lips are in different positions when pronouncing phonemes such as /th/ in *bath* and the /f/ in *baf*. They can also see that when mouth movements appear the same, such as when pronouncing /t/ and /d/, the phoneme is different because one is unvoiced and one is voiced (AAE speakers might transpose these sounds). Treiman (2004) found that AAE speakers spelled words such as *ballot* as *ballod* and *rigid* as *rigit*. Mirrors can reinforce instruction and allow students to see what is happening when phonemes are produced. For a list of phoneme cognates (phonemes that have identical mouth movements with one being voiced and the other unvoiced), see Carreker and Birsh (2019).

Incorporating letters. Phonemic awareness instruction combined with letters enhances the alphabetic principle, spelling, and decoding (Clemens et al., 2021). When incorporating letters, consider those that AAE speakers might use to represent phonemes perceived in words. For example, a student may not represent the final consonant in the consonant blend *-ld*, writing *hole* instead of *hold*, so it is important that the teacher understand that this spelling may be based upon AAE phonology. The final phoneme may not be represented in print if it is not noticed by the student.

The key to equitable teaching of phonemic awareness instruction for African American students is to provide engaging tasks while paying particularly close attention to those sounds that may vary from GAE. Moreover, when assessing sounds on phonological assessments, educators should understand the specific sounds that might be produced by AAE speakers so that their pronunciations will not be considered errors. Teachers should make note of responses during an assessment and address them with the student during instruction. Remembering that variances between GAE speakers and AAE speakers are differences and not disabilities is critical for ensuring equity in literacy instruction. ■

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References

Binks-Cantrell, E., Washburn, E. K., Joshi, R. M. & Hougen, M. (2012). Peter effect in the preparation of reading teachers. *Scientific Studies of Reading, 16*(6), 526-536.

Brady, S. (2020). A 2020 perspective on research findings on alphabetics (phoneme awareness and phonics): Implications for instruction. *The Reading League Journal*, *1*(3), 20-28.

California Department of Education (2022). *California's assessment of performance and progress's smart balance state-wide results.* Retrieved from http://caaspp.edsource.org/sbac/california-00000000000000.

Carreker, S. & Birsh, J. R. (2019). *Multisensory teaching of basic language skills: Activity book* (4th ed). Brookes.

Charity, A. H., Scarborough, H. S., & Griffin, D. M. (2004). Familiarity with school English in African American children and its relation to early reading achievement. *Child Development, 75*(5), 1340–1356. https://doi.org/10.1111/j.1467-8624.2004.00744.x

Delpit, L. (2006). *Other people's children: Cultural conflict in the classroom.* New Press.

Ehri, L., Nunes, S., Willows, D., Schuster, B., Yaghoub-Zadeh, Z., & Shanahan, T. (2001). Phonemic awareness instruction helps children learn to read: Evidence from the national reading panel's meta-analysis. *Reading Research Quarterly, 36*, 250-287. 10.1598/RRQ.36.3.2.

Ehri, L. C. (2020). The science of learning to read words: A case for systematic phonics instruction. *Reading Research Quarterly*, *55*(S1), S45– S60. https://doi.org/10.1002/rrq.334

Ehri, L. C. (2022). What teachers need to know and do to teach letter–sounds, phonemic awareness, word reading, and phonics. *The Reading Teacher*, *76*, 53– 61. https://doi-org.srv-proxy2.library.tamu.edu/10.1002/trtr.2095

Erbeli, F., Hart, S. A., & Taylor, J. (2018). Longitudinal associations among reading-related skills and reading comprehension: A twin study. *Child Development,* 89(6), e480–e493. https://doi.org/10.1111/cdev.12853

Green, L. (2002). *African American English: A linguistic introduction*. Cambridge University.

Green, L. (2011). *Language and the African American child.* Cambridge University.

Hatcher, P. J., Hulme, C., & Snowling, M. (2004). Explicit phoneme training combined with phonic reading instruction helps young children at risk of reading failure. *Journal of Child Psychology and Psychiatry, 45*, 338–358.

Keesey, S., Konrad, M., & Joseph, L. M. (2015). Word boxes improve phonemic awareness, letter–sound correspondences, and spelling skills of at-risk kindergartners. *Remedial and Special Education, 36*(3). 167–180.

Labov, W. (1995). *Language in the inner city: Studies in Black English vernacular.* University of Pennsylvania Press.

Melby-Lervåg, M., Lyster, S. A. H., & Hulme, C. (2012). Phonological skills and their role in learning to read: A

meta-analytic review. *Psychological Bulletin*, *138*(2), 322-352. https://doi.org/10.1037/a0026744
Mesmer, H. A., & Kambach, A. (2022). Beyond labels and agendas: Research teachers need to know about phonics and phonological awareness. *The Reading Teacher*, 76, 62– 72. https://doi-org.srv-proxy2.library.tamu.edu/10.1002/trtr.2102
Moats, L. C. (Summer, 2020). Teaching reading IS rocket science: What expert teachers of reading should know and be able to do. *American Federation of Teachers*, 4-9.
National Assessment of Educational Progress (NAEP). (2019). *The nation's report card: Reading*. National Center for Educational Statistics.
National Reading Panel. (2000). *Report of the National Reading Panel--Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. National Institute of Child Health and Human Development.
Pittman, R. T., Joshi, R. M., & Carreker, S. (2014). Improving spelling ability among speakers of African American English through explicit instruction. *Journal of Literacy Research and Instruction, 53,* 107-133.
Pittman, R. T. (2017). The case for implementing ELL teaching techniques with African American students. *English in Texas*, *47*(2), 40-44.
Pittman, R. T., Zhang, S., Binks-Cantrell, E., Hudson, A., & Joshi, R. M. (2020). Teachers' knowledge about language constructs related to literacy skills and student achievement in low socio-economic status schools, *Dyslexia, 25*(3), 200-219. https://doi.org/10.1002/dys.1628
Read, C. (1971). Pre-school children's knowledge of English phonology. *Harvard Educational Review, 41,* 1-34.
Rice, M., Erbeli, F., Thompson, C. G., Sallese, M. R. & Fogarty, M. (2022), Phonemic awareness: A meta-analysis for planning effective instruction. *Reading Research Quarterly*, *57*, 1259-1289. https://doi.org/10.1002/rrq.473
Rickford, J. R. (1999). *African American vernacular English: Features, evolution, educational implications.* Blackwell.
Russak, S. (2013). The contribution of phonological awareness to literacy acquisition in English as a foreign language: Cross-linguistic implications. *Perspectives on Language and Literacy, 39(*1), 17-22.
Texas Education Agency (2022). *STAAR Statewide Summary Reports.* Retrieved from https://tea.texas.gov/sites/default/files/2022_staar_spring_grade3.pdf
The Reading League. (2022). *Science of reading: Defining guide.* https://www.thereadingleague.org/what-is-the-science-of-reading/
Treiman, R. (2004). Spelling and dialect: Comparisons between speakers of African American vernacular English and white speakers. *Psychonomic Bulletin & Review*, *11*, 338-342. 10.3758/BF03196580.
Treiman, R. (2018). Teaching and learning spelling. *Child Development Perspectives, 0*(0), 1-5. doi: 10.1111/cdep.12292
Uhry, J. (2013). The importance of phonemic awareness instruction in learning to read and spell successfully. *Perspectives on Language and Literacy, 39*(1), 11-16.
Washington, J. A. & Seindenberg, M. S. (2021). Teaching reading to African American children: When home and school language differ. *American Educator, 45*(2), 26-33.
Wolfram, W., & Schilling, N. (2015). American English: Dialects and variation (3rd ed.). Wiley-Blackwell.

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