

Teaching Phonemic and Phonological Awareness to Children Who Speak African American English

Julie A. Washington, Ryan Lee-James, Carla Burrell Stanford

Language varieties, sometimes called dialects, refer to differences in the content and structure of language that exist within speech communities (Trudgill, 2000). Speech communities are groups that share rules and expectations for how language is used based on their cultural backgrounds (e.g., African Americans), or the geographic region within which they live (e.g., Southerners). Language varieties can impact all language domains (i.e., morphology, syntax, semantics, phonology, and pragmatics), meaning that speakers may have dialect-specific rules for how sentences are created and which phonological features are appropriate for use in a given word or context. There is tremendous variation in the use of American English by major geographic region (e.g., Southeast, Southwest, Northeast), as well as within these regions or cities (e.g., Appalachian English and Louisiana Creole), and by cultural background (e.g., Chicano English and Hawaiian English). These cultural and regional varieties represent the rich mix of racial and ethnic groups residing within the United States.

The variety of English spoken by many African American people in the United States, called African American English (AAE) is the focus of this paper. AAE has been widely documented. Wolfram & Thomas (2008) reported that through the 1990s five times as many published manuscripts were produced focused on AAE as any other American English dialect (Washington & Seidenberg, 2021). Interest in AAE, its use, and development in children has resulted in a robust literature focused on the impact of AAE on academic achievement in general, and especially literacy achievement. In particular, the influence of AAE on reading development, writing, and spelling has been examined (Craig & Washington, 2006; Mordaunt, 2011; Washington & Craig, 1994).

AAE affects early literacy skills in ways that may require differentiated classroom instruction that focuses on integrating this important language variety into both teaching and learning (Statistics, N.C.f.E., 2020). The purpose of this paper is to (1) present the characteristics of AAE and its relationship to the development of reading; (2) outline the impact of AAE on foundational language and reading skills, especially phonemic and phonological awareness; and (3)

provide some guidance for addressing variation in the classroom when teaching phonemic and phonological awareness, while simultaneously affirming African American children's identities by acknowledging and celebrating the language strengths they bring to the classroom.

African American English

Language varieties such as AAE are learned by children in their families, homes, and communities prior to entry into schooling. In a study focused on African American children and their caregivers, Washington and Craig (2002) found that the amount of AAE present in the language of young children was nearly identical to the amount used by their caregivers (Washington & Craig, 2002). This is good news! It demonstrates that these young children have successfully developed competence in the use of the language system that is used in their homes and communities, which is their first and most important communicative context.

Children who are learning two language varieties (e.g., General American English (GAE) and AAE) are called **bidialectal** language learners (Mordaunt, 2011; Washington & Seidenberg, 2021). In some cases, children may be learning more than two dialects (e.g., AAE, GAE, and Gullah); these children can be considered **multidialectal**. It is important to note that not all African American children are AAE speakers. Among those children who do speak AAE, many will encounter GAE as a primary language variety for the first time when they enter school. This is particularly true for children growing up in poverty who may have limited experiences outside

Julie A. Washington is a Professor in the School of Education at the University of California, Irvine, 2068 School of Education, Irvine, CA, USA; email julieaw@uci.edu.

Ryan Lee-James is the Chief Academic Officer at the Atlanta Speech School, 3160 Northside Parkway NW, Atlanta GA 30327; email: rjames@atlantaspeechschool.org.

Carla Burrell Stanford is currently a doctoral student and reading teacher at the University of California, Irvine, School of Education, Irvine, CA 92697, USA; email: cbstanfo@uci.edu.

of their communities and, thus, have been exposed primarily to AAE. Approximately nine out of 10 African American children growing up in poverty will be AAE speakers when they enter school. (Craig & Washington, 2006) Similar to children who are bilingual, bidialectal speakers must accommodate GAE in school, as it is the variety used in reading, writing, and other academic subject areas.

AAE influences primarily the morphology, syntax, and phonology of American English. When African American children arrive at school, they have had 4–5 years of oral language learning that influences not only how many words they know, a frequent focus in the literature, but also how language is used to transmit meaning and how children interact verbally with adults and with each other. Language is an important means for transmitting linguistic and cultural beliefs and signaling membership in a group that shares the same culture, values, and beliefs as the child. (Brown et al., 2015) Importantly, school represents a new, and separate speech community with its own rules and expectations for how language and meaning will be transmitted. Some children will find that their home language practices integrate seamlessly with the language of school (and text), whereas for other children, including some AAE speakers, the school language context may require acculturation to a new language community and require learning the communication norms that exist within the school environment. A simple example of this is that the new, school language community has communication norms that require raising one's hand before speaking. See Washington and Seidenberg (2021) and Washington and Craig (1994) for the major characteristics of AAE in children.

African American English and Reading

Decades of national data have shown that many African American children struggle with learning to read. In 2019, prior to the pandemic, the National Assessment of Education Progress called the nation's report card, reported that only 18% of African American fourth-graders were reading at or above a proficient level. (Statistics, N.C.f.E., 2020) The post-pandemic 2022 NAEP summary report showed the largest drop in fourth-grade reading scores (5 points) since 1990 occurred between 2020 and 2022 for all children. For African American children, there was an even more significant decrease (6 points) in reading performance during 2020–2022, with only 14% of fourth-graders reading at a proficient level or above, further widening the achievement gap (Education, U.S.D.o., 2022).

Language undergirds reading and children who have strong language skills are more likely to be strong readers as well. This much is true for all children. Among children who are learning a second language or those who speak

varieties of English such as AAE, the relationship between reading and language becomes more complicated. For these children, the strength of their general oral language skills combined with their ability to skillfully manage print written in a language or dialect that differs significantly from their own oral language variety can influence whether or not they will become proficient readers or will struggle with reading (Bialystok et al., 2005; Brown et al., 2015). Indeed, Brown et al. (2015) demonstrated that when print and oral language did not match, it took three times as many trials to achieve mastery as when they did match. (Brown et al., 2015) These outcomes suggest that dialect speakers will require more practice and exposure to integrate print and oral language to support reading.

Importantly, among first through fifth grade bidialectal, African American children, those who use the most dialect, *high-density dialect speakers*, have been found to struggle most when learning to read. (Gatlin & Wanzek, 2015; Washington et al., 2018) The distance between their oral language and print is wider for these children than for children who use a less dense dialect. High dialect speakers are those for whom more than 35% to >50% of their utterances include a morphological, syntactic, or phonological feature of AAE. (Thompson et al., 2004; Washington et al., 2018) Indeed, there is significant evidence in the extant literature showing that these high dialect users exhibit a more significant lag in reading, writing, and spelling than their peers who use less dialect. (Patton-Terry & Connor, 2010; Puranik et al., 2020; Washington & Seidenberg, 2021) Based on the findings of Brown et al. (2015) these students will require more practice with features of print that contrast with their oral dialect to achieve mastery. These outcomes highlight the importance of considering the impact of dialectal variation when teaching reading. These findings also suggest that it is not being a dialect speaker in and of itself that influences reading outcomes. Rather, it is the distance between oral dialect and print that appears to matter most. What does this mean for teaching African American children to read? (Table 1).

Phonological awareness and phonemic awareness are strong predictors of later reading achievement. The *simple view of reading* posits that reading is a product of decoding and comprehension ($R = D \times C$) (Gough & Tunmer, 1986). That is, children who become strong readers must learn to recognize words and analyze them at the phonemic and phonological levels and comprehend the language of text. Scarborough (2001) famously described the individual language comprehension and word recognition skills that must be mastered to develop skilled reading ability using the interwoven strands of a rope. In this model, word recognition includes phonological awareness, decoding, and sight recognition of familiar words, and children must

Table 1
AAE, Phonological and Phonemic Awareness

	Definition	Example (s)
Phoneme	Discrete sounds in words. They are manipulable. ¹	Consonants (e.g., /t/,/b/, /m/) Vowels (e.g., /a/,/i/,/e/)
Phonemic awareness	Understanding that words are made up of individual sounds and being able to identify and manipulate the sounds in words	Blending and segmenting sounds in words is an example of phonemic awareness /c/ + /a/ + /t/ = cat and is three sounds and three letters
Phonology	Patterns of sounds in language. Includes rules for how the sounds are distributed in words. ²	Pattern: /s/,/th/,/f/,/sh/ are produced by forcing air out of the mouth during sound production; they are all called fricatives Distribution: Fricatives can be followed by any vowel and can appear at the beginning, middle or end of words
Phonological awareness	Understanding language patterns and how to manipulate them to create new, related words and word combinations	Rhyming, segmenting syllables and sentences are examples of phonological awareness. c/ + /a/ + /t/ = cat ; change the final sound: /c/ + /a/ + /p/ = cap (onset-rime)

¹McFadden, T. (1998). Sounds and Stories: Teaching Phonemic Awareness in Interactions Around Text. *American Journal of Speech-Language Pathology*, 7(2), pp. 5–13.

²Lodge, Ken. (2009) *Fundamental Concepts in Phonology*. Edinburgh University Press.

learn to weave these skills together to achieve skilled, automatic reading. The simple view of reading and the reading rope both highlight the importance of phonological and phonemic skill awareness, word recognition, and comprehension at the word level for the development of strong reading abilities.

African American children enter formal schooling with well-developed phonemic and phonological knowledge, including a repertoire of consonants and vowel sounds in their oral dialect and an established understanding of the allowable sound combinations that make up words. Prominent phonological features of AAE include vowel shifts (e.g., “e” in *pen* is pronounced as *pin*), consonant cluster reduction (e.g., *fist* pronounced as *fis*), and substitution of consonants (e.g., “th” in *bath* pronounced as *baf*) (Green, 2004; Seymour & Seymour, 1981). These phonological features of AAE, though rule-governed based on the constraints of the dialect, differ systematically from GAE phonology used in the classroom and the academic language of instruction. These differences become important for teaching reading because in the early stages of reading development, children must rely on their established knowledge of the sound system to make connections between

speech and print. Discrepancies between spoken and written words can be a source of uncertainty for AAE speakers navigating two distinct language systems. Teaching approaches that support children as they navigate these differences, including providing more practice and time will be important for developing strong phonological representations from oral language to print. AAE impacts not only the phonological domain of language but also the phonological awareness of syllables and phonemes, as well as decoding, including spelling-sound correspondence.

Teaching Phonemic and Phonological Awareness to African American English Speakers (Carla)

Awareness and processing of phonemes is influenced by oral production of those phonemes. Accordingly, children who have phonological variants in their oral language will produce these variants in writing, and may need to resolve the differences between their phonological systems in perception as well. Consider the following exchange between a teacher and an African American learner, aged 6 years (Table 2):

Table 2
Vignette (Teacher w/ 6 Year Old AAE Speaker)

TEACHER: I will say a word, you repeat the word, tap the sounds, and then use the word in a sentence. The word is *gold*.

CHILD: /gol/

CHILD: Wait, are you saying gold like a leprechaun finds gold? Or is this like I scored a goal? Which one did you say?

TEACHER: What a great question and noticing! You are becoming a word detective. Goal and gold are very similar and only have one sound that makes them completely different words.

TEACHER REFLECTION: "This child realized and articulated that the missing sound mattered for word meaning. This interaction was a pivotal point for me as a teacher. I began actively seeking knowledge about AAE to better teach my children, gain a full understanding of the features of AAE, and intentionally connect AAE to GAE in print for my students."

In this exchange, it is the child who recognizes and asks for clarification regarding the possible discrepancy between what the teacher said and what he perceived. This is excellent, as phonological variations in AAE may result in some confusion on the part of the teacher or student about what word is being produced. The teacher's reflection is spot on. It is very important for teachers to recognize that differences are possible between the production of a word and an AAE-speaking child's perception of the word. This possibility makes it critically important for classroom teachers to recognize the places where phonemes may differ between AAE and GAE. In an early paper focused on linguistic variation, Seymour et al. (1998) made an important distinction between features of AAE that are shared with GAE (noncontrastive) compared to those that differ across varieties (contrastive). In the case of phonemes and phonological patterns, the contrastive features of AAE-GAE should be known by teachers and addressed in lessons focused on both phonemic and phonological awareness. Consider the phonological awareness instructional lesson that developed from the teacher–student conversation about the differences between *gold* and *goal* (Table 3):

In this whole classroom-based lesson the focus is on increasing awareness of the final phoneme /d/, which is often deleted by AAE speakers. In a study focused on phonological awareness Thomas-Tate et al. (2004) discovered that a standardized test targeting final consonants in first-grade AAE-speaking children underestimated the children's phonological knowledge (Thomas-Tate et al., 2004). Specifically, 75% of students scored below average when the final consonant was the targeted phoneme but scored in the average range when phonemes were assessed in the initial and medial positions in words. Final consonant deletion is a major phonological feature of AAE, but not all final consonants have the potential to be deleted; the variable nature of final consonants makes it important

for teachers to target. In this way, AAE students can be provided multiple opportunities to identify, produce, and manipulate phonemes in the final position, increasing their awareness of the presence, need to listen for and include final consonants in oral language and print. The teacher's use of Elkonin boxes to demonstrate the difference in the number of sounds between words that may be homophones in AAE and GAE along with the focus on changes in meaning provides important visual and auditory context for children to master phonological differences across their two dialects. Thus, it is not what is being taught in reading that is influenced by children's language variation: it is how it is taught, especially where the teacher's emphasis is placed (i.e., on contrastive features of the two dialects). Appendix A provides additional sample lessons for targeting selected AAE phonological forms.

Final Recommendations for Educators

The Simple View of Reading and Scarborough's Reading Rope are models that provide a framework for the necessary components of reading instruction, but these models do not tell us how to approach instruction or provide specific considerations for nonmainstream dialect speakers. The recommendations outlined below in combination with the sample lessons provided are designed to assist teachers in supporting and using the language strengths of AAE-speaking children on their journey toward becoming skilled readers.

1. *Learn about AAE.* The teacher in the preceding examples recognized the importance of learning the phonological features of AAE to effectively design lessons for her students. AAE is a sophisticated and complex language variety with evidence from child AAE speakers indicating that they are linguistically adept at navigating their first dialect. Upon entry into school, our task is to extend this early knowledge to include the second dialect,

Table 3
Final Consonant Deletion Lesson

TEACHER: Let us investigate.

The word *gold* has four sounds, /g//o//l//d/, The leprechaun finds gold. The word *goal*, /g/o/ /l/ has three sounds, I scored a goal in the soccer game. The words sound very similar and only have one sound that makes them completely different words. That one sound matters in making two different words with two different meanings.

Let us play some listening games to train our ears to think about all the sounds in words and to connect those words to meaning.

TEACHER: The word is gold (the teacher emphasizes the final /d/ sound). There are **gold** coins in the pot. Let us say the word together.

TEACHER AND CHILDREN: gold (at this point, the teacher and students put increased emphasis on the final sound to make it more salient)

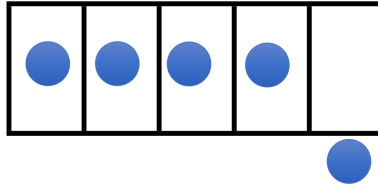
TEACHER: Now, repeat the word and punch out the ending sound.

CHILDREN: gold [punch and overemphasize the /d/ sound]

TEACHER: Let us tap all the sounds together.

TEACHER AND CHILDREN: /g//o//l//d/

TEACHER: At the end of a rainbow, we will find a pot of **gold**.



TEACHER: The word is goal (the teacher emphasizes the final /l/ sound). We can kick the football through the **goal**. Let us say the word together.

TEACHER AND CHILDREN: goal

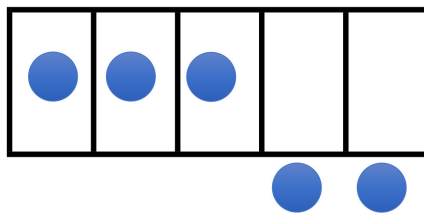
TEACHER: Now, repeat the word and punch out the ending sound.

CHILDREN: goal [punch and overemphasize the /l/ sound]

TEACHER: Let us tap all the sounds together.

TEACHER AND CHILDREN: /g//o//l/

TEACHER: If we kick the ball high enough, it will go through the **goal** posts.



GAE, which is also the language of books. Reading teachers who understand and come to appreciate the rich history of AAE can both increase their teaching effectiveness while also affirming the importance of supporting a child's strongest dialect (García et al., 2017; García & Sylvan, 2011). The renowned author, Toni Morrison expressed it best, "it is terrible to think that a child with five different present tenses comes to school to

be faced with books that are less than his own language. And then, to be told things about his language, which is him, that are sometimes permanently damaging." (Rickford & Rickford, 2000) Recognizing and acknowledging the intersection of race, language, and power, in the classroom is an important precursor to being able to affirm the language strengths that African American children bring to the classroom.

2. *Learn about general oral language development and AAE.* To effectively survey and monitor children's oral language development, especially PreK through second grade, acquiring knowledge of the characteristics of AAE and of early developmental language milestones is important. What should children know about language at 4, 5, 6, or 7 years old? Early language weaknesses can lead to later reading difficulty. African American children are disproportionately poor, and it is well known that children growing up in poverty may have smaller vocabularies and weaker overall language skills than their middle-income peers (Vernon-Feagans et al., 2012; Whitehurst & Fischel, 2014). There also is well-documented overlap among dialect features, clinical indicators, and language characteristics associated with economic disadvantage (McGregor et al., 1997; Oetting, 2018; Seymour et al., 1998), making surveillance of language growth very important for these students. Language disorders and reading disabilities can and do exist in children who speak dialect and who have socioeconomic disadvantage. The task for the teacher, and perhaps the speech-language pathologist, is to discern and address early language weaknesses before they negatively impact reading development.
3. *Learn about the science of reading and... Read!* The goal of reading is to derive meaning from text. Children who learn to effectively "crack the code" (i.e., decode words), have achieved a necessary, foundational, early reading skill. But word reading alone is not sufficient to support comprehension of larger text units, such as sentences and paragraphs, or to develop what Wolf et al. (2009) referred to as a *deep reading brain*.

The science of reading promotes structured literacy approaches that (1) differentiate instruction based on the outcomes of assessment and progress monitoring data; (2) deliver systematic reading instruction, following a logical scope and sequence; and (3) provide direct, intentional, and explicit reading instruction. All children, regardless of language and/or economic background benefit from this structured and intentional approach to literacy instruction when it is delivered with fidelity (Moats, 2019).

The impact of language and language variation on the reading gap has received considerably more attention than text-level influences. There is a growing body of research, which suggests that structured literacy may not be sufficient to support deep, integrated reading beyond the word

level, especially for children whose oral code is different than the written code (Noguerón-Liu, 2020; Washington et al., 2018). These children may require much more additional time and practice with reading text, beyond just word reading instruction. To achieve the skilled automatic reading described by Scarborough (Scarborough, 2001) and others an intentional focus on the integration of processes necessary to develop the deep reading skills described by Wolf et al. (2009) is required. Deep reading requires not only reading individual words but inferencing, deductive reasoning, critical analysis, and insight. These are skills that develop through instruction and practice with reading. As Wolf notes, it is "...the amount and quality of experiences with written language..." that shape reading circuits (p.33). Decoding text at the word level prepares students for higher-level reading processes. Mastering decoding processes allows readers to shift their time and attention away from the need to laboriously decode individual words and phrases toward processing the ideas and gaining meaning from the stories that they read. Reading is achieved when decoding becomes automatized and leads readers to deeper reading abilities. Current research suggests that in the absence of this time and practice, African American children may be developing shallow rather than deep knowledge of words and word reading that is not sufficient to sustain them into the older grades.

Good readers read! Exposing African American children to rich, culturally relatable books can be invaluable for encouraging reading, allowing them to gain the practice and time necessary to develop deep reading skills over time. (Gray et al., 2008; Ouimet, 2011) Individual reading and reading aloud to the whole class exposes children to text, and builds their knowledge of the structure of academic English, including complex syntax and text structure, supporting the development of higher-level language skills like inferencing, critical thinking, and deep comprehension. (Montag & MacDonald, 2015; Seidenberg & MacDonald, 2018) When we stop reading aloud to children, those who are having difficulty learning to read, will be limited in their access to more sophisticated language (Montag & MacDonald, 2015). Continuing to read aloud, through high school if needed, ensures that children can continue to develop their language skills.

Overall, it is important to underscore that good instructional practices—differentiation of content and pacing, following a systematic and cumulative skill sequence, explicitly modeling, scaffolding, and providing specific feedback and frequent checks for understanding—are effective for all children. For those who are bidialectal, how you implement these instructional practices, must be informed by the structure (rules that govern phonology,

morphology, and syntax) and function (e.g., context, and preservation of community and cultural connections) of the dialect. Indeed, African American children will have background experiences, exposure, cultural practices, and language knowledge that reflect their culture and speech community. These practices may differ in important and impactful ways from the education context. The contrasts between a child's oral dialect and the academic language of print, become a barrier to mastering reading, writing, and spelling if teachers are not (1) aware of the dialect and how it impacts reading instruction and (2) knowledgeable about how to leverage students existing language strengths to scaffold and support learning. The sample lessons we developed, include specific examples that teachers can use to support effective instructional practices while affirming African American children's use of their existing knowledge of AAE to learn rules of written language.

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REFERENCES

- Bialystok, E., Luk, G., & Kwan, E. (2005). Bilingualism, biliteracy, and learning to read: Interactions among languages and writing systems. *Scientific Studies of Reading*, 9(1), 43–61.
- Brown, M. C., Sibley, D., Washington, J. A., Rogers, T., Edwards, J., MacDonald, M., & Seidenberg, M. (2015). Impact of dialect use on a basic component of learning to read. *Frontiers in Psychology*, 6, 196.
- Craig, H. K., & Washington, J. A. (2006). *Malik goes to school: Examining the language skills of African American students from preschool-5th grade*. Psychology Press.
- Education, U.S.D.o. (2022). *NAEP long-term trend assessment results: Reading and mathematics*. USDOE: NCES: Washington DC.
- García, O., & Sylvan, C. E. (2011). Pedagogies and practices in multilingual classrooms: Singularities in pluralities. *The Modern Language Journal*, 95(3), 385–400.
- García, O., Johnson, S. I., & Seltzer, K. (2017). *The translanguaging classroom: Leveraging student bilingualism for learning*. Caslon Philadelphia.
- Gatlin, B., & Wanzek, J. (2015). Relations among children's use of dialect and literacy skills: A meta-analysis. *Journal of Speech, Language, and Hearing Research*, 58(4), 1306–1318.
- Gough, P. B., & Tunmer, W. E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education*, 7(1), 6–10.
- Gray, M., Coates, J., & Bird, M. Y. (2008). *Indigenous social work around the world: Towards culturally relevant education and practice*. Ashgate Publishing, Ltd.
- Green, L. (2004). Syntactic and semantic patterns in child African American English. In *Proceedings of the Eleventh Annual Symposium about Language and Society—Austin*. University of Texas.
- McGregor, K. K., Williams, D., Hearst, S., & Johnson, A. C. (1997). The use of contrastive analysis in distinguishing difference from disorder: A tutorial. *American Journal of Speech-Language Pathology*, 6(3), 45–56.
- Moats, L. (2019). Structured literacy: Effective instruction for students with dyslexia and related reading difficulties. *Perspectives on Language and Literacy*, 45(2), 9–11.
- Montag, J. L., & MacDonald, M. C. (2015). Text exposure predicts spoken production of complex sentences in 8- and 12-year-old children and adults. *Journal of Experimental Psychology: General*, 144(2), 447–468.
- Mordaunt, O. G. (2011). Bidialectalism in the classroom: The case of African-American English. *Language, Culture and Curriculum*, 24(1), 77–87.
- Noguerón-Liu, S. (2020). Expanding the knowledge base in literacy instruction and assessment: Biliteracy and translanguaging perspectives from families, communities, and classrooms. *Reading Research Quarterly*, 55, S307–S318.
- Oetting, J. B. (2018). Prologue: Toward accurate identification of developmental language disorder within linguistically diverse schools. *Language, Speech, and Hearing Services in Schools*, 49(2), 213–217.
- Quimet, A. (2011). *Culturally relevant literature how to identify and use culturally relevant literature*. https://fisherpub.sjf.edu/cgi/viewcontent.cgi?article=1014&context=education_ETD_masters
- Patton-Terry, N., & Connor, C. (2010). African American English and spelling: How do second graders spell dialect-sensitive features of words? *Learning Disability Quarterly*, 33(3), 199–210.
- Puranik, C., Branum-Martin, L., & Washington, J. A. (2020). The relation between dialect density and the Codevelopment of writing and Reading in African American children. *Child Development*, 91(4), e866–e882.
- Rickford, J., & Rickford, R. (2000). *Spoken soul: The language of black English*. John Wiley and Sons.
- Scarborough, H. S. (2001). Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. In S. Neuman & D. Dickinson (Eds.), *Handbook for research in early literacy* (pp. 97–110). Guilford Press.
- Seidenberg, M. S., & MacDonald, M. C. (2018). The impact of language experience on language and reading. *Topics in Language Disorders*, 38(1), 66–83.

- Seymour, H. N., Bland-Stewart, L., & Green, L. J. (1998). Difference versus deficit in child African American English. *Language, Speech, and Hearing Services in Schools, 29*(2), 96–108.
- Seymour, H. N., & Seymour, C. M. (1981). Black English and standard American English contrasts in consonantal development of four and five-year old children. *Journal of Speech and Hearing Disorders, 46*(3), 274–280.
- Statistics, N.C.f.E. (2020). *National Assessment of educational Progress: Reading report card for the nation and the states.*, O.o.E.R.a. improvement, Editor, U.S. Dept of Education: Washington, DC.
- Thomas-Tate, S., J. Washington, and J. Edwards (2004). Standardized assessment of phonological awareness skills in low-income African American first graders.
- Thompson, C. A., Craig, H. K., & Washington, J. A. (2004). Variable production of African American English across oracy and literacy contexts.
- Trudgill, P. (2000). *Sociolinguistics: An introduction to language and society*. Penguin UK.
- Vernon-Feagans, L., Garrett-Peters, P., Willoughby, M., Mills-Koonce, R., & The Family Life Project Key Investigators. (2012). Chaos, poverty, and parenting: Predictors of early language development. *Early Childhood Research Quarterly, 27*(3), 339–351.
- Washington, J. A., Branum-Martin, L., Sun, C., & Lee-James, R. (2018). The impact of dialect density on the growth of language and reading in African American children. *Language, Speech, and Hearing Services in Schools, 49*(2), 232–247.
- Washington, J. A., & Craig, H. K. (1994). Dialectal forms during discourse of poor, urban, African American preschoolers. *Journal of Speech, Language, and Hearing Research, 37*(4), 816–823.
- Washington, J. A., & Craig, H. K. (2002). Morphosyntactic forms of African American English used by young children and their caregivers. *Applied Psycholinguistics, 23*(2), 209–231.
- Washington, J. A., & Seidenberg, M. S. (2021). Teaching Reading to African-American children when home and school language differ. *American Educator, 2021*(6), 7.
- Whitehurst, G. J., & Fischel, J. E. (2014). Reading and language impairments in conditions of poverty. In *Speech and language impairments in children* (pp. 67–86). Psychology Press.
- Wolf, M., Barzillai, M., & Dunne, J. (2009). The importance of deep reading. *Challenging the whole child: reflections on best practices in learning, teaching, and leadership, 130*, 21.
- Wolfram, W., & Thomas, E. (2008). *The Development of African American English*. John Wiley & Sons.

Appendix A

Sample Lesson Plans

AAE feature	Description	Examples
Final sound of /th/ 	Following a vowel, the voiced and unvoiced sounds of /th/ are replaced with /f/, /t/, or /v/.	baf/bath bav/bathe wif/with wit/with wiv/with maf/math

Content knowledge to inform teaching

- All sounds can be placed in two categories:
 - Voiced = throat vibration
 - Unvoiced = no vibration
- The phoneme /th/ can be pronounced as voiced (e.g., they, bathe) and unvoiced (e.g., thought, bath) and is categorized as a tongue biter (i.e., interdental sound) to explain the formation in the mouth.
- "Th" is a digraph, two letters that make one sound.
- In the final position in words, the phoneme /th/ is a tongue biter and is **most often** unvoiced (e.g., bath) but can be voiced (e.g., bathe).
- Sound cousins are phonemes formed the same way in the mouth, with the difference in the sound being whether the sound is voiced or unvoiced.
 - The phoneme /f/ is an unvoiced lip biter.
 - The phoneme /v/ is a voiced lip biter and a sound cousin to /f/.
 - The phoneme /t/ is an unvoiced tongue tapper, and a sound cousin to /d/ is a voiced tongue tapper.

Lesson plan

Goal: To teach production of the unvoiced sounds of "th" in the final position in words and to connect the sound to the spelling.

Sound production of /th/

T: Today, we will become experts on a sound. Watch my mouth and listen. [The teacher makes the voiced /th/ sound, sticking out their tongue and biting slightly.] This is the only time you can stick your tongue out at your teacher. Now you try it.

C: Make /th/ sound.

T: Next, put your hand on your throat. [The teacher places their hand on their throat.] That is where your voice box is located. Make the sound again. Do you feel that vibration?

C: Make /th/ sound while placing a hand on the throat to feel the vibration.

T: This is a voiced (loud, motor on) /th/ sound. I will say words that begin with the /th/ sound. You repeat, and be sure you are making your voice box vibrate and sticking your tongue out at me. [Teacher calls words as children repeat.] that, the, them, then, they, this, and those.

C: Repeat words while feeling their voice box for vibration.

T: Guess what? This sound, /th/, has an unvoiced sound, too. Listen. [Teacher makes the unvoiced sound of /th/]. Let us try it in some words. [Teacher calls words as children repeat and feel voice box.] thank, thick, thin, thing, think, thimble, thistle, thorn, and Thursday.

C: Repeat words while feeling their voice box for vibration (should feel none on initial sounds in words).

T: Sound detectives, this sound likes to move around in words. It can be at the beginning of words like the word *think*, in the middle of words like the word *athlete*, or at the end of words like the word *bath*. When the /th/ sound is at the end of words, we have to pay extra special attention because it is so quiet. Let us practice being sound experts with /th/ at the end of words. I will show you a picture, say the word, and then you repeat the word while feeling your voice box. [Teacher displays Elkonin box picture cards, calls words as children repeat and feel voice box.] bath, math, path, moth, both, tenth, fourth, sixth, with, cloth, birth, and sloth.

C: Repeat words while feeling their voice box for vibration (should feel no sound on unvoiced final /th/sounds).

AAE feature	Description	Examples
Consonant blend reversal	The /sk/ blend is reversed to /ks/ when in the middle or final location in the word.	aks/ask escape/escape max/mask

Content knowledge to inform teaching

- Changing the blend from /sk/ to /ks/ inserts the sound for the letter “x” in place of the sound for “sk” into the word.
- A blend is two consonants that hang out together, yet each still makes its own sound.
- Blends can occur in the beginning, middle, and end of words.

Lesson plan

Goal: To teach sound production of the “sk” blend in the middle and end of words.

Materials: Elkonin boxes and chips

Phonemic awareness:

Sounds

T: Today, we will take some knowledge you already have about the sounds /s/ and /k/ and become experts on these sounds when they hang out together in a word. When two consonants hang out together we call it a blend. Let us make these sounds, repeat after me: /s/ and /k/.

C: Make /s/ and /k/sounds.

T: Good job! Now let us pull those sounds closer to each other, blending them. Listen. [Teacher makes the sound of /sk/.]

C: Make /sk/ sound.

Words

T: Now let us play a s-l-o-w motion game. I will say a word slowing down the /sk/ sounds, you repeat in slow motion, we will push sounds really slowing down the /s/k/s sounds, and then say the word with regular pace. [Teacher calls words slowing down the /sk/ in each word.] ski, skate, scope, sky, skill, scoot, scoop.

C: Children repeat words slowing down the /sk/ sound. Children and teacher push all sounds being sure to keep the order: /sk/. Children and teacher repeat words with regular pace.

T: That was so great! Now let us try moving that sound to the middle of the word. [Teacher calls words slowing down the /sk/ in each word.] escape, whisker, biscuit, basket

C: Children repeat words slowing down the /sk/ sound. Children and teacher **only push /sk/ sound in these words**. Children and teacher repeat words with regularly pace.

T: [Listens and moves through words again if more practice is needed.]

T: Now this is tricky. Let us move that /sk/ to the end of words. [Teacher calls words slowing down the /sk/ in each word.]

ask, mask, task, whisk, bask, risk, desk, dusk.

C: Children repeat words slowing down the /sk/ sound. Children and teacher push all sounds being sure to keep the order: /sk/. Children and teacher repeat words with regular pace.

Sentences

T: This is a challenge! Let us try using these words in sentences working really hard to pronounce /sk/ each time it is in a word.

Procedures: Teacher calls word and then the sentence. Children repeat word and the sentence. Children can give a thumbs up if they felt confident in their /sk/ sound. Children can act out sentences.

ask	My mom said, “Do not ask again!”
mask	I put on a my scary mask!
escape	My dog tried to escape from his crate.
whisk	My mom uses a whisk to stir the pancake batter.

Reading:

Materials: words, phrases, sentences projected or copies for each child