

# **Common Core State Standards and the Speech–Language Pathologist**

## **Standards–Based Intervention for Special Populations**

with 13.9% of SLPs in 2014 reporting working with students with dysphagia. That population is beyond the scope of this book, as swallowing and feeding issues are less directly related to the general curriculum (the Common Core State Standards [CCSS]) than articulation, language, and fluency disorders. The caseload of the public school SLP typically includes two subgroups: students who are receiving “speech only” or students who are receiving “speech as a related service.” The students commonly referred to as “speech only” are those with only a SLI. This is their primary and only disability under IDEA. Students who are receiving speech as a related service have another primary disability (or disabilities) and receive speech-language services as a related service (Power-deFur, 2011). As such, IDEA intends for speech-language services to support special education services to enable the child to be successful and progress in the general curriculum. This population of students includes students with primary disabilities such as autism, deaf-blindness, deafness/hearing loss, emotional disability, intellectual disability, orthopedic impairment, other health impairment, specific learning disability, and/or traumatic brain injury. See Chapters 5 (autism), 6 (deaf and hard of hearing), 7 (blindness and deaf-blindness), 8 (specific learning disabilities), and 9 (intellectual disabilities) for discussion of these populations and the roles of SLPs and their education partners in supporting students as they meet the CCSS.

A recent survey of school-based SLPs conducted by the American Speech-Language-Hearing Association (ASHA, 2014) revealed that children with articulation and language disorders represent the majority of students on their caseloads. For example, 92.7% of respondents

reported serving children with articulation/phonological disorders (and 62.9% reported serving children with childhood apraxia of speech). In the area of language, 89.1% reported serving children with pragmatic/social communication disorders and 92.2% reported serving children with semantic, morphological, or syntactic disorders. Fewer SLPs reported serving children with fluency (67.6%) or voice (22%) disorders. School-based SLPs also reported serving children with auditory processing disorders, swallowing and feeding disorders, cognitive communication disorders, literacy disorders, and traumatic brain injury (ASHA, 2014a).

This chapter presents the effect of various communication disorders on students’ ability to achieve success on the CCSS. This chapter presents four students to elucidate the process of analyzing the CCSS in comparison with students’ learning needs and developing appropriate interventions (see box below).

---

### Speech Sound Disorders

---

The term “speech sound disorder” encompasses any combination of difficulties with speech perception, speech motor production, and phonological rules related to speech sounds and speech segments that adversely affect speech intelligibility (ASHA, n.d.b). When Congress passed EHA in 1975, the prevailing term was “articulation disorder.” Currently, the term *articulation disorder* describes errors affecting the form of speech sounds (e.g., production of an interdental or lateral lisp) and may be associated with structural or motor deficits (e.g., cleft lip or palate, childhood apraxia of speech). In contrast, the term “phonological disorder

*Mariah* is a first grader who loves to dance. She enjoys all forms—hip-hop, ballet, and jazz—and goes to dance class weekly. She has been receiving speech-language services since she entered school in kindergarten. She has a severe speech sound disorder and concomitant difficulty with phonological awareness. Dance is a particularly good outlet for her, because it allows her to express herself without the difficulty she experiences when using speech.

*Antonio* is in third grade and is the youngest of three children. He enjoys playing most any kind of ball, especially baseball. He follows his favorite local team and goes to games with his dad and older brother. He often has his mitt in his backpack. He is very social and readily participates in classroom activities. He has been receiving speech-language services since he was in kindergarten, first with a primary focus on his speech sound disorder, but more recently focusing on his comprehension and use of syntax and morphology, now that he has only a few speech sound distortions.

*Joe* is a fourth-grade student who takes karate lessons, enjoys comic books, and likes to illustrate stories he writes for himself. After his newborn hearing screening at the hospital, he received a diagnosis of bilateral moder-

ate to severe hearing loss. He was fitted for bilateral hearing aids at 4 months of age and has received speech-language services through early intervention from 6 months of age. Joe wears his hearing aids all day. Joe has a vocabulary deficit secondary to his hearing loss. Joe began wearing glasses approximately 1 year ago and wears them all day. After school, Joe is usually tired and tends to hang out in his room by himself, not doing much of anything. Joe is the second child with an older sister who is in seventh grade and achieves well in school.

*Sam* is a fifth-grade student who has a fluency disorder. He is the second of three boys in his family. One of his brothers and his father also stutter. He is on the robotics team, where he thrives. They are going to a competition this fall at the state fair, and Sam is already getting ready. Sam has been receiving speech-language services since first grade. He tends to avoid speaking in class in whole-group and small-group discussions. When he does speak, he pauses at inappropriate places in the communication and frequently uses a low volume. He generally avoids eye contact when speaking. Sam sits with some friends at lunch and is observed to be a regular participant in lunchtime conversations.

der” describes disorders stemming from impairments in the phonological representation of phonemes and speech segments, including phonotactic rules governing syllable shape, structure, and stress (ASHA, n.d.b).

Children with speech sound disorders generally lag their age peers in

producing words with the appropriate phonemes. They may demonstrate substitution, deletion, distortion, or addition of phonemes, either due to difficulties in placement of the articulators or due to difficulty with the phonological rules associated with producing phonemes and words. Differences in production of speech

sounds (phonemes) that are attributable to dialect or non-English language influences are not considered speech sound disorders (ASHA, n.d.b; Bleile, 2015). The development of an accurate speech sound system relies on motor control for articulatory performance, knowledge of the phonology of language, and the ability to perceive phonemes in running speech (Nelson, 2010). Approximately 8%–9% of children have a speech sound disorder. This falls to 5% for first graders (National Institute of Deafness and Other Communication Disorders [NIDCD], 2010), which is likely a combination of the child's maturation and intervention received from SLPs. There is a higher prevalence for boys than girls and a low positive correlation with socioeconomic status (ASHA, n.d.b). These figures include children with one or two phoneme errors (commonly [s] and [r], articulation disorders) or multiple error patterns. Children with multiple error patterns generally have errors on phonological rule systems. Other children with multiple error patterns may exhibit childhood apraxia of speech due to a neurological deficit in which the child is unable to exhibit voluntary control over the articulators for speech production in the absence of neuromuscular deficits (Bleile, 2015). In either situation, the presence of multiple error patterns drastically impacts the child's intelligibility and can make it difficult to identify if there is a concomitant language production issue.

As many as 50%–70% of children with speech sound disorders experience general academic difficulty through their high school years (Bernthal, Bankson, & Flipson, 2013; Bleile, 2015). An initial impact is the reduced clarity of the students' speech. Many students with speech sound disorders avoid speaking in class, not wanting to draw attention to their

speech. This behavior may result in social isolation, limiting the students' ability to learn from peers.

The presence of speech sound disorders is associated with lower performance on phonological awareness tasks (Bernthal, Bankson, & Flipson, 2013; Justice, Gillon, & Schuele, 2013). Children with phonological disorders are more likely to have difficulty with phonological awareness and literacy than children with articulation disorders. Children's performances on phonological awareness tasks are consistently associated with reading ability, so it is not surprising that children with severe speech sound disorders tend to have poorer reading skills (Anthony et al., 2011), especially if the errors persist after the age of 6 years, 9 months (Nathan, Stackhouse, Goulandris, & Snowling, 2004). Further, the presence of reduced speech intelligibility adversely affects teachers' perceptions of students, as they frequently perceive such students as having less academic potential (Bleile, 2015).

The presence of a speech sound disorder of any degree of severity can adversely affect a child's ability to master a variety of the standards in the CCSS, especially those in Phonological Awareness (Reading Foundation standards) and in Speaking and Listening. The Speaking and Listening standards hold the expectation that students will be able to report on a topic, tell a story, or recount an experience, speaking clearly at an understandable pace (CCSS.ELA-LITERACY.SL.4.4) (NGA & CCSSO, 2010). In addition, the entirety of the Phonological Awareness standards (spanning kindergarten and first grade) may be challenging for students with speech sound disorders. The effect of a speech sound disorder on acquisition of the standards is further explored in the following case study.

---

### Speech Sound Disorder Case Study

Mariah is receiving speech-language services for the second year, focusing on her severe speech sound disorder. The SLP has focused on improving her intelligibility but is also aware of the need to address phonological awareness to support Mariah's acquisition of foundational skills in reading.

#### Step 1: What Are the Relevant Standards?

All of the Phonological Awareness (PA) standards from the CCSS Reading Foundational Skills in first grade are relevant, as Mariah's speech sound disorder has seriously affected her ability to understand and manipulate phonemes:

- Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
- Orally produce single-syllable words by blending sounds (phonemes) including consonant blends.
- Isolate and pronounce initial, medial vowel, and final sounds (phonemes) in spoken single-syllable words.
- Segment spoken single-syllable words into their complete sequence of individual sounds (phonemes) (CCSS.ELA-LITERACY.RF.1.2, A–D) (NGA & CCSSO, 2010).

A review of the kindergarten standards reminds the SLP and teacher that Mariah had not mastered the following standards prior to entering first grade:

- Demonstrate an understanding of spoken words, syllables, and sounds (phonemes).
- Recognize and produce rhyming words.

- Count, pronounce, blend, and segment syllables in spoken words.
- Blend and segment onsets and rimes of single-syllable spoken words.
- Isolate and pronounce the initial, medial vowel, and final sounds (phonemes) in three phoneme (consonant-vowel consonant, or CVC) words. (This does not include CVCs ending with /t/, /r/, or /x/.)
- Add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words (CCSS.ELA-LITERACY.RF.K.2) (NGA & CCSSO, 2010).

#### Step 2: What Are the Necessary Language Skills Required for Success With These Standards?

For Mariah to be successful in meeting these phonological awareness standards, the SLP determines that she will need to have the following communication skills:

- Produce all phonemes clearly.
- Produce all syllables in multisyllable words.
- Identify and separate onset and rime in words.
- Identify rhyming and alliteration when presented by others.
- Produce alliteration.
- Create rhyming words with single and multisyllabic words.
- Count, segment, and blend syllables.
- Count, segment, and blend phonemes.

#### Step 3: Analyze the Child's Current Skills.

The SLP and the teacher meet together to identify Mariah's current skills and identify how her speech sound disorder

is influencing her prereading skills. They note that Mariah does not speak up in class or in small groups. She does not ask questions of the teacher or peers, and she does not attempt to clarify her speech if she is misunderstood. Together they identified that Mariah has the following challenges in PA:

- Although Mariah could identify words that do not rhyme, she cannot consistently identify a rhyming word with greater than 50% accuracy. She has particular difficulty with two-syllable words and words ending in consonant clusters.
- Mariah can identify alliteration in words but has difficulty producing alliteration, especially with words beginning with affricates.
- Mariah can blend two-syllable words but has difficulty blending words of three or more syllables.
- Mariah is able to accurately complete syllable deletion with two-syllable compound words but has difficulty deleting morphemes (e.g., prefixes or suffixes) and phonemes.
- Mariah is able to blend phonemes for consonant (C) vowel (V) (CV), VC and CVC words but makes errors when consonant clusters or multisyllable words are introduced.

The SLP reviewed Mariah's IEP and identified the following from the present level of academic achievement and functional performance (PLAAFP):

- On the Diagnostic Evaluation of Articulation and Phonology (DEAP) (Dodd, Hua, Crosbie, Holm, & Ozanne, 2002), Mariah exhibited consonant cluster

reduction, stopping, deaffrication, final consonant deletion in multisyllabic words, and weak syllable deletion in words of three or more syllables. Mariah was stimulable for all phonemes in isolation and continues to stop fricatives in consonant CV, VCV, and VC combinations.

- A Percentage of Consonants Correct (calculated from a spontaneous speech sample of 50 utterances) was 63%. Error patterns noted on the speech sample were consistent with those on the DEAP.
- Mariah's hearing was found to be within normal limits on the kindergarten screening.

Mariah's IEP includes these goals:

- include final consonants and weak syllables in multisyllabic words in 90% of opportunities;
- replace phonological process of stopping (e.g., "s" becomes "t") with frication (e.g., creating the airstream for the consonant "s") in 80% of opportunities in words;
- identify and create one- and two-syllable words that rhyme in 90% of opportunities;
- accurately blend syllables in three or more syllable words and phonemes in one- and two-syllable words in 75% of opportunities; and
- accurately delete morphemes and phonemes in two-syllable words in 75% of opportunities.

**Step 4: Review Classroom Instructional Materials.** The SLP's review of the first-grade reading materials revealed extensive reliance on students' PA skills. For example, students will read directions that

involve exchanging one letter for another and understand the sound-symbol relationship to be able to create new rhyming words. Further, she is expected to read a new word and be able to pronounce it and generate a rhyming word.

**Step 5: Design Intervention.** The SLP and classroom teacher met to discuss intervention approaches. They decided that the SLP would focus on Mariah’s speech sound disorder in direct intervention, and she would join the teacher in the classroom in whole and small group activities related to phonological awareness.

*Direct Intervention:* The SLP decides to use a minimal pairs approach for Mariah’s speech sound disorders (Bernthal, Barnkson, & Flipson, 2013; Bleile, 2015). She will select words with the same onset but different rime, facilitating rhyming skills. Similarly, words for minimal pairs addressing final consonant deletion will include the same phoneme in the initial position, facilitating alliteration skills. Classroom reading materials are used for target words. The SLP will address final consonant deletion with minimal pairs of words that contrast inclusion or deletion of plural, possessive, and past tense markers.

*Collaborative Classroom-Based Intervention:* The SLP and the teacher identified a small group of students who are having difficulty with phonological awareness skills of rhyming, sound and syllable blending, and segmentation. During the center time during Language Arts, 2 days/week, the SLP leads the small group in activities such as the following:

- Create the first and last names of a person/animal in a photo, both with the same first phoneme.
- Pass a beanbag, and when you get the beanbag, say a word that

rhymes with a word given by the SLP.

- When playing a matching game, find words that rhyme.
- Play “Talk Like an Alien,” changing all words to begin with a certain phoneme from the planet [x] (planet name is sound of phoneme).
- Create “Hink pinks,” word pairs that rhyme (e.g., overweight pet is a “fat cat,” a laughing rabbit is a “funny bunny”).

Appendix 4–A includes a completed CCSS Analysis Worksheet applied to Mariah. The SLP and the teacher notice that Mariah begins to become more engaged in the class after the SLP has been present during the centers. As Mariah increases her engagement, she begins to participate more in class instructional activities, gaining more opportunities for participation and increasing her mastering of PA concepts. In addition, the increase in opportunities for oral communication increase the generalization of her work on her speech sound disorder.

---

## Language Disorders

---

ASHA identifies spoken/oral language disorders as “a significant impairment in the acquisition and use of language across modalities (e.g., speech, sign language, or both) due to deficits in comprehension and/or production across any of the five language domains (i.e., phonology, morphology, syntax, semantics, pragmatics” (ASHA, n.d.c). When a spoken language disorder is present without another disability (e.g., intellectual disability, hearing loss), it is generally termed “specific language impairment.” The abbreviation for specific language impairment (SLI) is the