

EDCI 4010 Response to Comment 7.5.d. “Practice”

**Reviewers Comment:** Reviewers could not find evidence of encoding or morphological awareness being addressed.

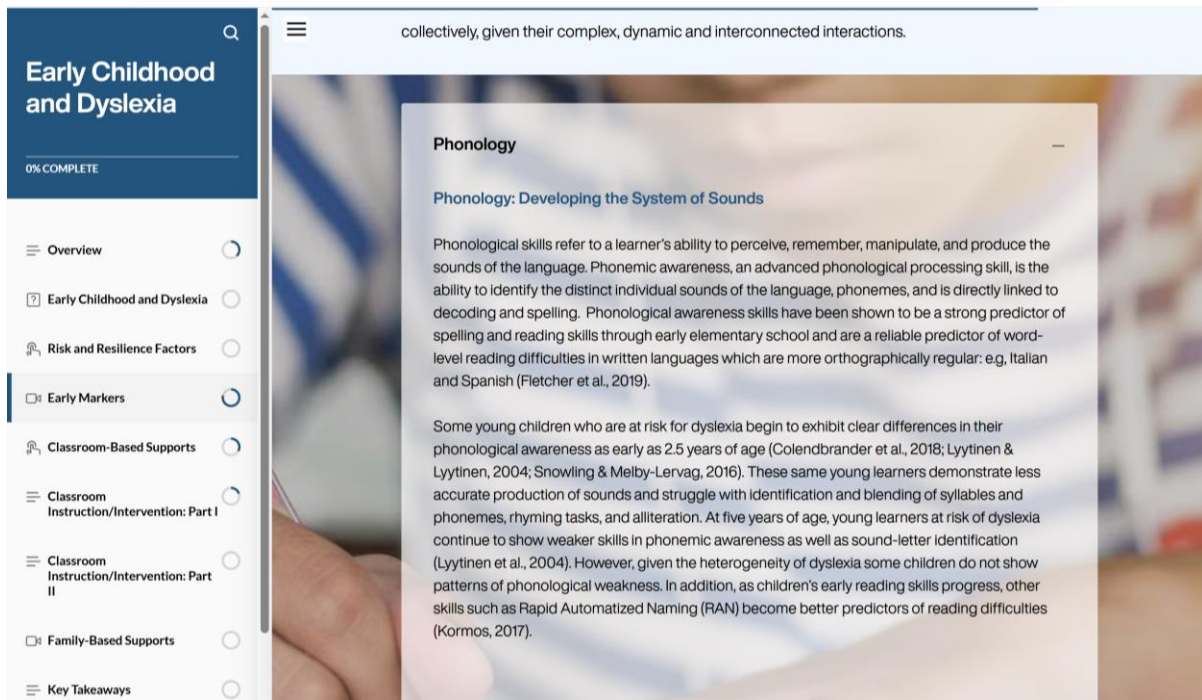
**Response:**

Screenshots of the lesson 4 from the UC/CSU Collaborative “Early Childhood and Dyslexia” module are provided below.

Lesson 4 of the module presents language skills across domains of phonology, morphology, orthography, syntax, semantics, and pragmatics, as predictors of literacy skills. Specifically, it looks at phonology and morphology as predictors of decoding and encoding (spelling).

The lesson features reflection questions (Question 1 and 3; also in screenshots) that elevate the assignment to “practice level”

**Phonological Skills and Spelling**



**Morphological Skills and Spelling (please refer to 3<sup>rd</sup> paragraph below)**

## Early Childhood and Dyslexia

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- Overview
- Early Childhood and Dyslexia
- Risk and Resilience Factors
- Early Markers
- Classroom-Based Supports
- Classroom Instruction/Intervention: Part I
- Classroom Instruction/Intervention: Part II
- Family-Based Supports
- Key Takeaways

### Morphology

#### Morphology: Understanding Meaningful Word Parts

Morphological skills refer to learners' ability to understand, accurately and flexibly use, and manipulate word parts, such as prefixes, suffixes, and roots in a given language. Morphological skills are key to both language and literacy development (Siegel, 2016). Understanding of morphological patterns allows for faster and more efficient processing of oral and written language, where the listener or reader can predict the meaning and grammatical forms of words as the text progresses.

In English, inflectional morphology, word endings to indicate tense, number, possession, or comparison, is one of the central components of grammar. Children as young as two years of age acquire the use of up to 20 morphemes. However, young children at risk for dyslexia struggle with inflectional morphology and often have difficulties using and processing inflectional morphemes: e.g., -ed: skip-skipped; -s: doll-dolls; -er or -est: long-longer-longest. Difficulties in processing and using inflections that are observed in children at risk for dyslexia as young as two years of age predict language skills at five years of age (Lyytinen & Lyytinen, 2004).

Morphological skills are interconnected with phonological skills, especially during the beginning stages of reading and writing development, and contribute to establishing fundamental decoding and spelling skills (Orkin et al., 2022). It is especially important to teach the role of morphemes in written language, given that only 4 morphemes (s, es, ed, ing) are represented in more than half of all words with morphemes in primer texts. In addition morphemes are connected with orthographic skills providing visual chunks of text that contribute to orthographic mapping (Ehri, 2014) and reading efficiency. In the context of morphological skills development, bilingualism in those languages where morphemes play a central role, provides an advantage of stronger morphological awareness (Cohen-Mimran et al., 2022; Siegel, 2016).

## Orthography, Alphabetic Principle and Spelling

## Early Childhood and Dyslexia

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- Credits

### Orthography

Orthography refers to the writing system of a language. English orthography, which has evolved over centuries with contributions from Germanic groups (Anglo-Saxons), the Norman French, and Latin and Greek, is considered an alphabetic writing system; i.e., the letters of the alphabet (graphemes) represent the sounds (phonemes) of the spoken language. Due to its complex history and the influence of multiple languages, English orthography is considered non-transparent (Borleffs et al., 2019). This means that in English sound-spelling (i.e., phoneme-grapheme) correspondences are not always one-to-one or direct. Children must learn not only regular orthographic rules, but also irregular spelling patterns that derive from underlying morphemes: i.e., English is a morphophonemic not a purely phonemic writing system. Therefore, research on early childhood literacy development situates orthography in relationship to phonology, morphology and semantics. Young children begin by learning and connecting phonology (sounds) to semantics (meaning). Later they begin mapping sounds (phonemes) onto graphemes (letters and letter combinations) and learn how to spell and decode (Harm & Seidenberg, 2004). Studies show that in early childhood spelling one's name is a good way to begin learning a language's orthography (O'Leary & Ehri, 2020).

#### Alphabetic Principle

The alphabetic principle refers to the understanding that graphemes (letters and letter patterns) represent the sounds (phonemes) of spoken language. Beginning readers must learn the concept that spoken words are comprised of sounds and that letters and letter combinations represent these sounds. They learn to apply the alphabetic principle when they learn to connect the letters in print (graphemes) with the distinctive sounds (phonemes) of their spoken language. This ability depends upon both phonemic awareness and alphabet knowledge. Consistently over decades of research, letter name knowledge in pre-school has been one of the strongest predictors of later reading success (Bond & Dykstra, 1967; Share et al., 1984; Scarborough, 1998). These findings suggest that young children who struggle mastering letter names in pre-school and kindergarten may be at risk for later reading difficulties. Learning the names of the letters aids young children in learning the sounds the letters represent, as some letter names include a sound associated with it: e.g., "B" [bee] and "G" [gee]. In addition, very young children use their knowledge of letter names as a resource to spell: e.g., "da" for "day" and "GP" for "jeep" (Chomsky, 1971; Read, 1971). These early uses of sound-symbol relationships provide the foundation for understanding that letters can represent more than one sound and that sounds can be represented by more than one letter. This understanding is a necessary precursor for phonetic decoding.

**Reflection Questions:** Questions 1 and 3 specifically presuppose responses focused on encoding in conjunction with phonological and morphological skills.

The screenshot shows a web browser window with the URL [ca-literacy-dyslexia-collab.ucla.edu/e-learning-modules/early-childhood-and-dyslexia/](https://ca-literacy-dyslexia-collab.ucla.edu/e-learning-modules/early-childhood-and-dyslexia/). The page features a dark blue sidebar on the left with the title "Early Childhood and Dyslexia" and a progress indicator "0% COMPLETE". The sidebar contains a list of menu items: Overview, Early Childhood and Dyslexia, Risk and Resilience Factors, Early Markers, Classroom-Based Supports, Classroom Instruction/Intervention: Part I, Classroom Instruction/Intervention: Part II, Family-Based Supports, and Key Takeaways. The main content area is light blue and contains a white box with the heading "Reflection Questions" and three numbered questions. At the bottom of the page, there is a dark blue button labeled "CONTINUE".

**Early Childhood and Dyslexia**  
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*Reflection Questions*

1. What are some of the early markers of risk for dyslexia and literacy difficulties in each of the reviewed language domains (i.e., phonology, orthography, morphology, semantics, syntax, and pragmatics)?
2. For development of which language domains does growing up bilingual provide an advantage?
3. What specific activities and tasks might be challenging for young multilingual learners?

CONTINUE