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# Beyond English centrality: integrating expansive conceptions of language for literacy programming into IEPs

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This article addresses the English centrality in reading policy, assessment, and instructional practices in the U.S. and its implications for the educational programming for emerging bilingual students (EBs) with disabilities. A recent review of the state of practice as it relates to EBs with disabilities reveals concerns that have endured for nearly six decades: biased assessment, disproportionality issues in special education, and teachers' lack of understanding of language acquisition and students' potential. These concerns demonstrate a need for the field to prioritize multilingual lenses for both the identification of and programming for EBs with disabilities. We propose attention to conceptions of language that expand beyond the structuralist standpoint that prevails in the current science of reading reform. We offer guiding principles for IEP development grounded in sociocultural perspectives when designing bilingual instructional practices, which can be applied to the educational programming for EBs with disabilities. Within a sociocultural view of bilingualism and biliteracy, language, and literacy are understood by multiplicities in use, practice, form, and function, in which all communicators draw from expansive meaning-making repertoires, whether in listening, speaking, reading, writing, viewing, and multimodally representing. By expanding conceptions of a student's linguistic repertoire, we honor their use of language as one, holistic system in which their named languages plus a multitude of linguistic practices intersect and interact.

## KEYWORDS

bilingual special education, emerging bilingual students with disabilities, biliteracy, IEPs, science of reading

## Introduction

Significant research demonstrates the socio cultural, cognitive, and academic benefits of bilingualism and multilingualism (Bialystok, 2016; Kroll and Dussias, 2017; Esposito, 2020), and yet, instruction and assessment of literacy in U.S. schools continue to be primarily defined by student achievement in English. In fact, most emerging bilingual<sup>1</sup> (EB) or multilingual students are served in English-only programs (Office of English Language Acquisition, 2019). Longitudinal data point to increased academic achievement for

<sup>1</sup> We use the term emerging bilingual (EB) to advocate for expansive, fluid, and dynamic uses of language and literacy in U.S. schools. We use it interchangeably with the term multilingual learner.

students whose instruction honors the multiplicities of language. Specifically, EB students in dual language bilingual education programs eventually outperform their monolingual English-speaking peers over time (August and Shanahan, 2006; Collier and Thomas, 2017; Steele et al., 2017). EBs with disabilities also perform at higher levels than peers in English-only instruction (Genesee and Fortune, 2014). Yet even with the demonstrated academic benefits of multilingual instruction, equity barriers remain in dual language programs, like course placements that result in tracking practices (Morita-Mullaney et al., 2020).

Obstacles to bilingual instruction compound for EBs with disabilities (Cheatham and Hart Barnett, 2017). Broughton et al. (2023) name English-centric instruction as a type of restriction to the least restrictive environment (LRE) under the federal mandate for free and appropriate public education (FAPE). When EB students become eligible to receive special education provisions, they typically lose access to instruction that supports their full linguistic repertoires. Multilingual learners with disabilities are less likely to receive instruction in the least restrictive environment than their monolingual peers with disabilities, an intentional referent category intended to illuminate the group without systematic problems accessing educational opportunities, most of whom speak English (Sullivan, 2011). Multilingual learners are also less likely to receive instruction that supports rich language development than their non-disabled peers (Kangas, 2014; González and Artiles, 2015). Reflecting English-centric education policies and practices in the U.S. (Scott and Venegas, 2017), academic goals in the IEP prioritize eventual achievement in English.

Further barriers include the fact that educators pervasively hold deficit perceptions of EBs with disabilities. Some educators erroneously assume that EBs cannot manage bilingual education (Conner et al., 2020), should be tracked into lower-level secondary courses, or that ESL services are less important than special education services (Harry and Klingner, 2007; Kangas, 2014). For these students, their home language is often considered a problem, rather than a resource (Ruiz, 1984).

Furthermore, historically, oral language assessment data have often been missing in the pre-referral, referral, eligibility determination, and IEP development process, which recent research reports as a continuous issue (Cavazos and Ortiz, 2020). As a result, multidisciplinary teams are likely to misinterpret literacy data of EBs as evidence of a disability, whether learning disabilities or intellectual disabilities (Ortiz et al., 2011; Cavazos and Ortiz, 2020). Most EBs with disabilities become eligible for special education under the category specific learning disability (SLD) (U.S. Department of Education, 2015), most of whom are identified as having a reading disability (McCardle et al., 2005). The identification of SLDs in EB students is often confounded by educators' perceptions of the learning disability, in addition to a lack of oral language assessment data. The disability category SLD is commonly described as a judgmental, subjective, or even "soft" form of a disability because of the judgments made by the team when interpreting student data (Ortiz et al., 2011; Dickman, 2020). According to the Office of Special Education Programs (2023), "students identified with an intellectual disability were more likely to be an English learner than all students with disabilities."

Students with an English learner (EL) designation are an increasing and highly heterogeneous population in U.S. schools in PK-12 grades (U.S. Department of Education, 2015;

National Center for Education Statistics, 2023). In the 2019–2020 school year, ELs or EBs represented 10.4% of students in kindergarten through 12th grade, up from 8.1% in the 2000–2001 school year (Office of English Language Acquisition, 2022). Despite the population growth of EBs in the U.S., the field of special education has yet to remove the many barriers to equitable education for emerging bilingual students with disabilities. Almost 20 years ago, Artiles and Klingner (2006) illuminated the lack of scholarship devoted to EBs with disabilities, saying, "It is paradoxical that we possess little knowledge about ELLs in special education at a time of explosive changes in this population" (p. 2188). More recently, Ortiz et al. (2020) review the state of practice as it relates to EBs with disabilities, and they reveal concerns that have endured for nearly six decades: "overrepresentation in special education, biased assessments, stigma associated with disability labels, and teachers' negative attitudes toward, and lowered expectations for, the potential of these students" (p. 245). Each of these concerns demonstrate a need for the field to prioritize multilingual lenses for both the identification of and programming for EBs with disabilities.

Furthermore, schools are facing crises of special education and bilingual education teacher shortages, rendering the language of instruction even more likely to be only in English. Special educators often report lacking deep knowledge of multilingual language development and the preparation to meet the needs of EBs with disabilities (Cheatham and Hart Barnett, 2017). Furthermore, without adequate understanding of the special education identification process, bilingual educators, and others can also contribute to inappropriate referrals to special education (Ortiz et al., 2011).

The popular Science of Reading movement focuses on English-centric discrete reading skills, early identification, and interventions for students with dyslexia and other specific learning disabilities (Hanford, 2018, 2019; Moats, 2020). However, as we will explicate, its literature perpetuates narrow conceptions of language and literacy and contains a dearth of scholarship devoted to emerging bilingual students and EBs with disabilities in professional development and in instructional programs and practices (Goldenberg, 2020; Noguérón-Liu, 2020). Given the focus on English as the default language of literacy instruction and assessment in research, policy, and practice, EBs with disabilities lose opportunities to access their home languages, which inhibits their learning.

In this article we first address four key topics regarding English prioritization in IEPs and the literacy programming for EBs with disabilities: (1) English-dominant ideologies in education; (2) presumptions of monolingual English in educational programming and teacher preparation; (3) English-centric literacy intervention and assessment scholarship; and (4) reductionist conceptions of language in the Science of Reading.

We then propose attention to conceptions of language that expand beyond an understanding of language structure, including categories like phonology, phonetics, morphology, orthography, grammar, syntax, text structure, and semantics. Gottlieb (2023) states, "although structuralism serves a legitimate function, it does not suffice when viewing bilingualism" (p. 5). Similarly, we argue for sociocultural perspectives when designing bilingual instructional practices, which can be applied to the educational programming for EBs with disabilities. Grounded in sociocultural

theory, translanguaging paradigms treat language as more than a static, formulaic structure. Instead, they view language as a social, cultural, ideological, and political practice with multiplicities of structures and use. In this view, readers and speakers are understood to use not simply English, Spanish, or Japanese, for example, but also Englishes, Spanishes, and Japaneses.

## English-dominant ideologies in education

The prominence of monolingual English in the programming for students with disabilities relates to entrenched English-dominant ideologies in educational practice and policy. Schools are places where youth learn whether their language and literacy practices are legitimized by the people and systems that shape their education (García and Kleifgen, 2020). Multilingual learners face “traditions of knowledge and unequal power relations” (de Souza, 2017, p. 263) in schools, where dominant monolingual ideologies determine what counts as literacy, what counts as language, and who is considered a literate being. Language, in any context, is the site of cultural and political power (García and Kleifgen, 2020).

Research also problematizes monoglossic language ideologies informing policies and the resulting English-centric educational practices that marginalize EB students’ bilingualism (Flores et al., 2020). In the state of Colorado, for example, the Colorado General Assembly (2023) states that instruction in public schools “shall be conducted principally through the medium of the English language” and assist EBs to “make an effective transition to English” (pp. 3–4). Conversely, the responsibility for bilingual education lies with individual school districts, where they are expected to make their utmost efforts to promote and support bilingual skills. English is mandated to learn academic content, and it is inevitable to acquire English language skills for success in the current U.S. educational system, while bilingual education is considered of secondary importance.

Also reflective of monolingual ideologies is the term *English learner* (EL), a federally designated category for students whose primary language is not English. The EL designation is commonly based on language proficiency measures that have been used to pathologize bilingualism in racialized groups, like Latinx students (Flores et al., 2020). Such proficiency assessments and their implementation promote notions of deficiency in students’ development in either language. In some cases, students whose native language is English become designated as “English learners” because another language is spoken at home. Flores et al. (2020) describe how monoglossic views of language, where language is viewed as a single structure in which proficiency can be determined by a single test, influence teachers’ deficit perspectives of students’ language and literacy development.

Understanding the impact of English-dominant ideologies on educational access for EB students with disabilities also requires considering how such ideologies intersect with other systemic inequalities that manifest among multiple demographics, like race and class. Across many states, language programming results in benefits for White English-dominant populations while dispossessing resources, opportunities, and rights of linguistically- and racially-minoritized communities (Valdez et al., 2016;

Flores and García, 2017; Cervantes-Soon et al., 2020; Freire et al., 2022). For example, in some places the popularity of dual language bilingual education programs has led to school populations that no longer reflect the racial demographics of the neighborhoods and instead are mostly White English-speaking students from across the city who seek out the benefits of bilingualism and biliteracy (Palmer et al., 2014). As Luke and Dooley (2009) state: “Mainstream schooling, then, creates a site for contestation over language and cultural resources with tensions between mainstream L2 and L1, institutional structure and learner agency, between linguistic/cultural reproduction and student resistance” (p. 5). Essentially, bilingualism in education bears differential value depending upon the group who desires it.

Dominant ideologies of language presume singular, structural notions of a linguistic system that are associated with nation-states (e.g., English, Japanese, and Spanish). Language as a formal structure with rules toward which to adhere stem from socio-political manifestations of nation building and colonialism because language, as a rule-bound structure, creates a metric by which to draw borders and determine belongingness (Flores and Rosa, 2015; García and Kleifgen, 2020). However, language is not simply a single, static structure to be acquired by learning to adhere to strict rules around its conventions, grammars, meanings, and alphabetic phonologies. Language is also defined by multiplicities in use, practice, form, and function, in which all communicators draw from expansive meaning-making repertoires, whether in listening, speaking, reading, writing, viewing, and multimodality representing (García and Kleifgen, 2020; Gottlieb, 2023).

## Monolingual English presumptions in educational programming and teacher preparation

The secondary importance of students’ bilingualism in U.S. schools yields implications for special education teachers. Because language services are federally mandated for EBs, educational programming for EBs in special education should include explicit information about language proficiency and language programming. According to a guidance document from the U.S. Department of Justice and the U.S. Department of Education about the education of EB students, “the IDEA requires that the IEP team considers, among other special factors, the language needs of a child with limited English proficiency as those needs relate to the child’s IEP” (Lhamon and Gupta, 2015, pp. 26–27). However, in practice, IEPs often lack adequate information about EB students’ unique linguistic or cultural characteristics, despite the best practice of addressing language and academic needs simultaneously (Hoover et al., 2019; Ortiz and Cavazos, 2023, this issue). In a pilot study examining a sample of IEPs for emerging bilingual students, Hoover et al. (2019) noted that the IEPs did not sufficiently reference the varied linguistic and cultural needs of students, and the IEPs failed to incorporate language-related measurable goals, service delivery options, and accommodations for EBs. In fact, the IEPs reflected educational programming for monolingual English speakers.

The IEP supports teachers’ instructional planning for EBs with disabilities. Most special education teachers report that

they frequently use the IEP when planning instruction but need more resources to meet IEP requirements (Fowler et al., 2019). When information about students' English proficiency and language services is missing from the IEP, special educators may defer responsibility for language support elsewhere, presuming a monolingual English conception of academic achievement and neglecting the role of language in learning.

Both preservice and in-service special education educators, including both monolingual and bilingual educators, have "little to no knowledge on atypical second language development as well as little to no knowledge on how sociocultural factors influence content-area learning for emergent bilingual students with disabilities" (Jozwik et al., 2020, p. 48). Despite several states requiring EB-specific training for all teachers, many preservice and in-service teachers view the training as merely another requirement (Altavilla-Giordano and Blitz, 2023). The absence of clear preparation for teaching EBs with disabilities places teachers in a situation in which they must rely on their personal educational beliefs for instruction, which can yield deficit perspectives (Ortiz et al., 2020). EB students with disabilities report school experiences that largely differ from perceptions of their academic abilities held by their teachers, where teachers tend to hold deficient views about students' capabilities (Kangas, 2020).

Furthermore, in a study surveying 202 elementary special education teachers of EBs learners, Paneque and Barbeta (2006) found that teachers' sense of efficacy correlated with their perceived proficiency in the language of the target students. Importantly, no statistically significant association was found between teachers' sense of efficacy and their teacher preparation experience, years of experience, or student socioeconomic status. They felt effective when they knew the students' native language(s). This study corroborates with other research that demonstrates the importance of teachers' ability to leverage the multiplicity of students' languages into their instruction and assessment (Artiles and Ortiz, 2002; Jozwik et al., 2020; Ortiz et al., 2020). Miranda et al. (2019) examined a special education teacher education program that had revised their curriculum to support the education of EBs with disabilities and found the content about EBs to be disjointed and teachers' sense of efficacy in teaching EBs to be lacking. Due to the insufficient guidance for educators, there remains "an urgent need to clarify the professional competencies that should be expected of bilingual special education teachers" (Wang and Woolf, 2015, p. 49).

Moreover, special education teachers raise concerns about "the preparation of their general education colleagues and paraprofessionals to support students with exceptionalities to meet the range of goals in their IEP" (Fowler et al., 2019, p.25). While special education teachers play a crucial role in interacting with and supporting EBs with disabilities, general education teachers also bear significant responsibility for ensuring the academic success of these students. Despite this fact, teacher preparation programs often run in parallel tracks for general, bilingual, and special education, limiting opportunities for collaboration among these three units (Ortiz and Robertson, 2018). In fact, the majority of studies on the preparedness of mainstream educators for ELL students focused on their beliefs about ELs, while studies on practical tools for educators to use were limited (Villegas et al., 2018). While the number of EBs in public schools is increasing, the practical support needed to effectively teach this population is still lacking in practice.

## English as the default language in literacy intervention and assessment

Despite advancements in scholarship that champion the benefits of bilingualism and biliteracy instruction, states are not mandated to provide native language instruction, increasing the likelihood that evidence-based practices are in English (Ortiz et al., 2020). Doing so neglects the full linguistic repertoires of EBs and contributes to pervasive, discriminatory misconceptions of their academic deficits.

Research studies on "what works" often neglect important demographic factors that would help the field understand what works *for whom* (Klingner and Edwards, 2006). Failure to adequately describe research samples, including English learner designation, threatens the population validity of the reading interventions used in the studies (Moore and Klingner, 2014). Despite special education organizations' calls for thorough descriptions of research participants in terms of age, gender, race, ethnicity, language background, socioeconomic status, and so forth, research reviews have documented a consistent negligence over time in the fields of special education and psychology for adhering to these fundamental research requirements (Artiles et al., 1997; Trent et al., 2014). Because the category of English learner is significantly heterogeneous, an inadequate description of study participants' language profiles obscures the efficacy of such interventions for various populations, leading to blanket statements and inappropriate generalizations about what works (Moore and Klingner, 2014).

Despite public schools' obligation to ensure equal access to a high-quality education for EBs as stipulated under Title VI of the Civil Rights Act of 1964, barriers to optimal educational environments for these students persist. Chief among these barriers is the use of English-only assessments in the special education identification process. Assessing EBs in English-only can lead to inappropriate identification of risk for a learning disability. Accurate identification of risk for a reading or math disability in EBs, thus, requires confirmation that the disability resides in both languages (Swanson et al., 2023). Where possible, formative and/or summative assessments in both the home language and English should be used to establish if the determinant factor of a learning difficulty is limited English proficiency. When assessments in a particular language are unavailable, educators need to interpret English assessment results with greater caution.

Like assessment, literacy interventions for EBs with disabilities are often based on the needs of monolingual English speakers. Research on reading difficulties among monolingual English speakers has focused on word-level reading deficiencies, which has been found to be an important source of reading comprehension difficulty for these students (Lesaux et al., 2006). However, for multilingual learners with reading difficulties, research shows that the development of a range of linguistic comprehension skills in English (vocabulary and listening comprehension) has a greater effect on reading comprehension than word reading (Cho et al., 2019). In a longitudinal study of Spanish- and English-speaking first graders, Luft Baker et al. (2023) found that decoding in Spanish significantly predicted Spanish reading comprehension outcomes in second grade. However, when English and Spanish oral reading fluency scores were added to the model, decoding no longer explained the variance in reading comprehension.

Rather, bilingual language proficiency was a better predictor of reading comprehension outcomes. The research suggests that oral language proficiency (vocabulary, listening comprehension, syntactic awareness, and metalinguistic awareness) is a strong predictor of text-level skills. In fact, when elementary teachers applied asset-based perspectives of EBs' bilingualism, reading comprehension outcomes improved, whereas leniency and English-only approaches were negatively associated with reading comprehension achievement (Oh and Mancilla-Martinez, 2021).

Language services and evidence-based literacy interventions specific to the identified areas of growth should be part of a comprehensive literacy intervention program for EBs with a reading disability and not only in the general education and English language development (ELD) classroom (Klingner and Soltero-González, 2009). Research also shows that encouraging students to draw on their full linguistic repertoire through translanguaging practices can support not only oral language but also students' understanding of texts (García et al., 2017), generation of texts (Velasco and García, 2014), and metalinguistic awareness (García and Kleifgen, 2020). In special education settings, recent scholarship also argues for the integration of translanguaging as a pedagogical practice with universal design for learning to promote greater inclusion and opportunities to learn for EBs in special education settings (Cioé-Peña, 2021). The merging of both frameworks can help create and sustain linguistically and academically expansive learning environments for EBs labeled with a disability.

## Problematizing the English centrality in the science of reading

Recent movements that call for the science of reading to support learners with dyslexia and other phonological-based learning disabilities reveal what Share (2021) refers to as Anglocentrism of the science of reading. Such Anglocentrism neglects reading development in languages other than English as well as for readers with knowledge of more than one language. The broader research literature about the relationship between language and reading expands beyond a monolingual English view of language, but this scholarship is not sufficiently acknowledged in the science of reading literature (Noguerón-Liu, 2020; Share, 2021).

Based on the simple view of reading (Gough and Tunmer, 1986), the science of reading conceptualizes reading comprehension as the product of word recognition and language comprehension, or what Gough and Tunmer (1986) originally described as decoding and listening comprehension in English. Before describing the simple view of reading (SVR), Gough and Tunmer (1986) state, “[W]e will assume that decoding ability varies directly with the knowledge of the spelling-sound correspondence rules of English” (p. 7). The SVR does not account for multilingual readers; thus, its applicants presume a monolingual English frame.

Despite widespread use of the SVR within science of reading discourse, key scientifically based understandings about reading and reading difficulties extend beyond what is presented in the SVR (Hoover and Tunmer, 2018; Compton-Lilly et al., 2020; Duke and Cartwright, 2021). Not only are some reading difficulties separate from word recognition and language comprehension, but also these two constructs are interrelated, as exemplified

in vocabulary knowledge, reading fluency, and morphological awareness (Duke and Cartwright, 2021). The role of language comprehension on decoding skills holds important implications for EBs, as semantic knowledge affects word recognition, not only the inverse (Noguerón-Liu, 2020). For example, although vocabulary knowledge is commonly thought to be a language comprehension component, it also contributes to word recognition development, as evidenced by quantitative factor analyses (Kendeou et al., 2009; Tunmer and Chapman, 2012). Similarly, because reading fluency requires not only automaticity and accuracy but also prosody, semantic knowledge interrelates with syntactic knowledge and decoding skills (Schwanenflugel and Benjamin, 2017). Furthermore, morphological awareness is not named in the SVR, but it lies at the nexus of word recognition and language comprehension. Morphological awareness is an integral skill for EBs because teachers can make explicit the morphological connections across languages with shared linguistic roots, like Spanish and English (Marks et al., 2023). Attention to morphological awareness development can give insight into the causes of reading comprehension difficulties that are disproportionately prevalent among EBs (Kieffer and Lesaux, 2012).

Although the simple view of reading (Gough and Tunmer, 1986) names language comprehension as necessary for reading comprehension, language has been largely misrepresented in science of reading discussions (Cervetti et al., 2020). Amid the public debate about the science of reading, journalist Hanford (2018) claimed, “language comprehension is what develops naturally in children when people talk to them...Decoding is what kids have to be taught” (p. 13). However, research evidence reveals otherwise. Studies have shown the benefits of explicit instruction designed to promote language growth, which ultimately supports reading comprehension, even in monolingual English contexts (Cervetti et al., 2020). Further, among science of reading proponents, language is often undertheorized to mean basic linguistic structures. For example, Moats (2020) draws from structuralism when outlining language components: phonetics and phonology, phoneme awareness, morphology, orthography, semantics, syntax, and text structures. Of these six language structures Moats lists with examples and applications to teaching, none include the sociocultural, functional, affective, historical, or political dimensions of language, a perspective strongly situated within scholarship that examines bilingualism and multilingualism.

The term structured literacy, often associated with science of reading practices, applies to instructional methodologies applicable in English. As defined by the Board of Directors of the International Dyslexia Association, structured literacy describes “our successful approach to teaching reading [which] goes by many names: Orton-Gillingham, Multi-Sensory, and Explicit Phonics” (Malchow, 2014, para 2). In an effort to “market” and “build a brand,” the board coined the term structured literacy, characterized by scripted lessons, predetermined pacing, stepwise curricula, decodable texts, and the primacy of phonics instruction in order to support students with dyslexia (Hanford, 2018, 2019; Spear-Swerling, 2019; Pierson, 2024).

Phonological awareness, and psycholinguistic processing more generally, is a distinguishing feature of dyslexia and reading-related specific learning disabilities (Fletcher et al., 2013). However, phonological awareness assessments that are often used as part of the body of evidence when identifying a specific learning

disability, typically are not validated on distinct populations like EBs (Shergill et al., 2023). The Comprehensive Test of Phonological Processing (CTOPP) (Wagner et al., 2013), for example, shows greater invariance among Spanish- and English-speaking EB respondents in the test's standard three-factor model of Phonological Awareness, Phonological Memory, and Rapid Automatic Naming. Shergill et al. (2023) found an improved model fit for EBs when Phonological Awareness and Phonological Memory were combined as a single factor, suggesting that professionals use appropriate caution when interpreting the results.

In addition to caveats related to dyslexia-related assessments for EBs, instructional cautions are warranted. Many states have legislated dyslexia-specific instruction, yet the extensive support for English structured literacy programs like Orton Gillingham across PK-12 schools and teacher education programs may be scientifically unfounded (Stevens et al., 2021). In a meta-analysis of various studies about the efficacy of Orton Gillingham, Stevens et al. (2021) found no statistically significant improvement in foundational literacy skills (i.e., phonological awareness, phonics, fluency, and spelling) for students with or at risk for word-level reading disabilities, but they found a small mean effect size (0.22) in favor of the approaches. They conclude that multisensory approaches need to be more consistently defined, and more rigorous research studies with large samples are needed to justify the common application of Orton Gillingham in policy and practice. Simplistic, prescriptive, and decontextualized approaches to language and literacy that place the onus of change on teachers masks the systemic inequities and solutions, like greater funding or personnel to support students' cultural and linguistic sustainability (Compton-Lilly et al., 2020).

Generally, the science of reading prioritizes bench, or basic, research, which provides foundational knowledge that can be further studied as applied science. The science of reading includes the cognitive and neuroscience basis for beginning reading development, studied separately from applied or classroom-based research (Seidenberg, 2017; Shanahan, 2020). Seidenberg et al. (2020) express three concerns with current efforts to prematurely apply reading science in schools. Like Shanahan (2020), they call for more translational research to better apply basic reading science to classroom practice. Second, they are concerned that the science of reading has been oversimplified because the movement has "sanction[ed] practices that are only loosely connected to it" (p. S121). Finally, they argue that scientific theories and practices are continually changing and embracing the complexities of reading, which creates additional challenges in the application of them.

## Expansive conceptions of language and literacy for emerging bilingual students with disabilities

Expansive conceptions of a student's linguistic repertoire honor their use of language as one, holistic system, in which their named languages plus a multitude of linguistic practices intersect and interact (Grosjean and Li, 2013; Przymus, 2023). Within a sociocultural view of bilingualism and biliteracy (Flores et al., 2020), literacy and language practices are understood according to how communities use them in everyday life, such as cross-linguistic connections. The relationships between a person's

languages, sometimes referred to as L1 and L2, are reciprocal, albeit in nuanced ways and influenced by multiple factors. Cross-linguistic transfer supports students' literacy development. For example, phonological awareness is highly related across languages (Cárdenas-Hagan et al., 2007; Gottardo et al., 2021), and students who have developed meaning-making strategies, syntactic awareness, and knowledge of genres in an L1 can more easily apply those skills in their L2 (Durgunoğlu, 2002). Student development of word-level skills in two languages are also related, but the relationship is more complex because the skills are influenced by whether the languages use an alphabetic script, the language(s) of instruction, and general experience with the languages. Implications for practice have long pointed toward the need for teachers to help students make cross-linguistic relationships explicit wherever possible (Durgunoğlu, 2002; Gottardo et al., 2021).

A multilingual and multiliterate frame widens conceptions of success for EBs with disabilities. Because many assessments used in the special education referral process are normed on monolingual respondents or bilingual respondents using monolingual data collection and interpretation, Przymus and Alvarado (2019) advocate for translanguaging approaches in the referral and evaluation process. They used a story-telling approach that allowed students to use multiple languages to evaluate students' linguistic and narrative abilities. Musyoka (2023) also examines translanguaging practices for Deaf and Hard of Hearing students, drawing from Crip linguistics to propose that teachers embrace the multimodal nature of language use. The term Crip refers to the intentional practice of disrupting and transforming the familiar. Based on this framework, Musyoka argues for a language perspective that recognizes "disabled ways of being in producing language: sensory orientations, interdependence, mutual-aid, and world-building, care work, and the ways that time interacts with the body, mind, and language" (p. 8). Like translanguaging, Crip linguistics expands notions of language beyond standardized forms of the structural nature of English, the majority hearing language, which privilege the able-bodied and able-minded. The multimodality of language and literacy "recognizes and embraces the characteristics of our new information age and its associated communication skills (Gottlieb, 2023, p. 5) while also affirming the multimodal communication needs of students with disabilities.

A widened view of language and success aligns with WIDA principles. Many states belong to the WIDA consortium, an organization that "provides language development resources to those who support the academic success of multilingual learners." (WIDA, 2003, para 1). Grounded in sociocultural theory, 4 of the 10 guiding principles name issues related to bias, agency, identity, multiplicity, flexibility, and culture as they pertain to language development. These principles derive from a view of language that supports multiliterate pedagogy.

In Broughton et al. (2023) Freirean critical consciousness model, praxis toward anti-oppressive education for EBs with disabilities includes three components: creating a plan for service delivery, partnering with families and communities, and practicing and advocating for equity. Their suggestions for considering matters of language name the importance of attending to the agency and expertise of the student, their families, and

their communities. With a framework of critical consciousness, the multidisciplinary team should examine the sociopolitical and sociocultural contextual factors, like the type of language programming offered at the school and in the district, or confronting various myths about bilingual education, like the misconception that it will confuse students with disabilities.

Acknowledging the growing heterogeneity of the EB student population, we offer guiding principles for developing IEP goals and educational programming based on a holistic portrait of the student's language and literacy profiles, given multiple measures and data sources. We recommend the following suggestions to de-center English for literacy programming within the IEP:

1. Integrate information related to the student's language proficiency and language programming into all components of the IEP, including the present levels of English proficiency, academic achievement, and functional performance in both languages, measurable annual goals, service delivery decisions, and accommodations.
2. Report language proficiency assessment data in all the students' languages, when assessments are available in those languages. Utilize parent interviews and previous school reports and assessments translated by an interpreter.
3. Ensure that the language of the IEP is translated into a language the student's parents can understand, per federal mandate. The IEP team can utilize an AI translation system if there are no interpreters available in the school district.
4. Write IEP goals that align with the language of instruction and language goals written by language service providers. Utilize WIDA standards and objectives as a reference.
5. Identify literacy interventions, instructional methods, and accommodations that encourage students to use all their languages flexibly and purposefully in their instructional day to every possible extent. At all tiers of instruction, students should be afforded opportunities for translanguaging and language supports should align across tiers.
6. Provide comprehensive literacy interventions that integrate oral language, reading, writing, and multimodal forms of communication and meaning-making as well as application in meaning-based activities that respond to the assets of multilingual learners.
7. Incentivize professional development for preservice and in-service special educators that supports them to prepare the IEP according to students' cultural and linguistic needs and strengths.
8. In general, take the stance that students' languages are a resource to be leveraged, not a problem to be overcome. Do not pathologize language errors. They are an important part of language development.

In supporting the literacy development of EBs with disabilities, we envision the expansion of English-centric and structuralist notions of language to sociocultural perspectives. Multilingual frames grounded in a sociocultural lens can counter narrow views of language and literacy and enhance possibilities of success for EBs with disabilities. In embracing this stance, we acknowledge the continual presence of multilingual, multiliteracy and multimodal practices in EBs' home and school environments, and the power structures that shape them. The expansion of the construct of language works to sustain the multiplicities of students' languages, language variations, and cultures to support their agency and identity, and deepen their learning.

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## References

- Altavilla-Giordano, J., and Blitz, E. (2023). Reimagining preparation for teachers of designated English learners. *Phi Delta Kappan* 105, 19–25.
- Artiles, A. J., and Klingner, J. K. (2006). Forging a knowledge base on English language learners with special needs: Theoretical, population, and technical issues. *Teach. Coll. Rec.* 108, 2187–2194. doi: 10.1111/j.1467-9620.2006.00778.x

Artiles, A. J., and Ortiz, A. A. (2002). *English language learners with special education needs*. Washington, DC: Center for Applied Linguistics.

Artiles, A. J., Trent, S. C., and Kuan, L. A. (1997). Learning disabilities empirical research on ethnic minority students: An analysis of 22 years of studies published in selected refereed journals. *Learn. Disabil. Res. Pract.* 12, 82–91.

- August, D., and Shanahan, T. (2006). *Developing literacy in second-language learners: Report of the national literacy panel on language-minority children and youth*. Mahwah, NJ: Erlbaum.
- Bialystok, E. (2016). Bilingual education for young children: Review of the effects and consequences. *Int. J. Biling. Educ. Biling.* 21, 666–679. doi: 10.1080/13670050.2016.1203859
- Broughton, A. J., Przymus, S. D., Ortiz, A. A., and Cruz, B. J. S. (2023). Critical consciousness in decision-making: A model for educational planning and instruction with bilingual/multilingual students with disabilities. *Teach. Except. Child.* 55, 338–349. doi: 10.1177/00400599221093655
- Cárdenas-Hagan, E., Carlson, C. D., and Pollard-Durodola, S. D. (2007). The cross-linguistic transfer of early literacy skills: The role of initial L1 and L2 skills and language of instruction. *Lang. Speech Hear. Serv. Sch.* 38, 249–259. doi: 10.1044/0161-1461(2007)026
- Cavazos, L. O., and Ortiz, A. A. (2020). Incorporating oral language assessment into MTSS/RTI frameworks: The potential of personal narrative assessment. *Biling. Res. J.* 43, 323–344.
- Cervantes-Soon, C. G., Degollado, E. D., and Nuñez, I. (2020). “The Black and brown search for agency: African American and Latinx children’s plight to bilingualism in a two-way dual language program,” in *Bilingualism for all: Raciolinguistic perspectives on dual language education in the United States*, eds N. Flores, A. Tseng, and N. Subtirelu (Bristol: Channel View Publications), 199–219.
- Cervetti, G. N., Pearson, P. D., Palincsar, A. S., Afflerbach, P., Kendeou, P., Biancarosa, G., et al. (2020). How the reading for understanding initiative’s research complicates the simple view of reading invoked in the science of reading. *Read. Res. Q.* 55, S161–S172. doi: 10.1002/rrq.343
- Cheatham, G. A., and Hart Barnett, J. E. (2017). Overcoming common misunderstandings about students with disabilities who are English language learners. *Interv. Sch. Clin.* 53, 58–63. doi: 10.1177/1053451216644819
- Cho, E., Capin, P., Roberts, G., Roberts, G. J., and Vaughn, S. (2019). Examining sources and mechanisms of reading comprehension difficulties: Comparing English learners and non-English learners within the simple view of reading. *J. Educ. Psychol.* 111, 982. doi: 10.1037/edu0000332
- Cioé-Peña, M. (2021). Raciolinguistics and the education of emergent bilinguals labeled as disabled. *Urban Rev.* 53, 443–469. doi: 10.1007/s11256-020-00581-z
- Collier, V. P., and Thomas, W. P. (2017). Validating the power of bilingual schooling: Thirty-two years of large-scale, longitudinal research. *Ann. Rev. Appl. Linguist.* 37, 203–217. doi: 10.1017/S0267190517000034
- Colorado General Assembly (2023). Colorado revised statutes 2023, 22 Colorado General Assembly § 22-1-103.
- Compton-Lilly, C. F., Mitra, A., Guay, M., and Spence, L. K. (2020). A confluence of complexity: Intersections among reading theory, neuroscience, and observations of young readers. *Read. Res. Q.* 55, S185–S195. doi: 10.1002/rrq.348
- Conner, C., Baker, D. L., and Allor, J. H. (2020). Multiple language exposure for children with autism spectrum disorder from culturally and linguistically diverse communities. *Biling. Res. J.* 43, 286–303. doi: 10.1080/15235882.2020.1799885
- de Souza, L. M. T. M. (2017). “Multiliteracies and transcultural education,” in *The Oxford handbook of language and society*, eds O. García, N. Flores, and M. Spotti (Oxford: Oxford University Press), 261–279.
- Dickman, E. (2020). *Demystifying learning disability* [White paper].
- Duke, N. K., and Cartwright, K. B. (2021). The science of reading progresses: Communicating advances beyond the simple view of reading. *Read. Res. Q.* 56, S25–S44. doi: 10.1002/rrq.411
- Durgunoglu, A. Y. (2002). Cross-linguistic transfer in literacy development and implications for language learners. *Ann. Dyslexia* 52, 189–204. doi: 10.1007/s11881-002-0012-y
- Esposito, A. G. (2020). Executive functions in two-way dual-language education: A mechanism for academic performance. *Biling. Res. J.* 43, 417–432. doi: 10.1080/15235882.2021.1874570
- Fletcher, J. M., Stuebing, K. K., Morris, R. D., and Lyon, G. R. (2013). “Classification and definition of learning disabilities: A hybrid model,” in *Handbook of learning disabilities*, 2nd Edn, eds H. L. Swanson, K. R. Harris, and S. Graham (New York, NY: The Guilford Press), 33–50.
- Flores, N., and García, O. (2017). A critical review of bilingual education in the United States: From basements and pride to boutiques and profit. *Annu. Rev. Appl. Linguist.* 37, 14–29. doi: 10.1017/S0267190517000162
- Flores, N., and Rosa, J. (2015). Undoing appropriateness: Raciolinguistic ideologies and language diversity in education. *Harvard Educ. Rev.* 85, 149–171. doi: 10.17763/0017-8055.85.2.149
- Flores, N., Phuong, J., and Venegas, K. M. (2020). “Technically an EL”: The production of raciolinguistic categories in a dual language school. *TESOL Q.* 54, 629–651. doi: 10.1002/tesq.577
- Fowler, S. A., Coleman, M. R., and Bogdan, W. K. (2019). The state of the special education profession survey report. *Teach. Except. Child.* 52, 8–29. doi: 10.1177/0040059919875703
- Freire, J. A., Gambrell, J., Kasun, G. S., Dorner, L. M., and Cervantes-Soon, C. (2022). The expropriation of dual language bilingual education: Deconstructing neoliberalism, whitestreaming, and English-hegemony. *Int. Multiling. Res. J.* 16, 27–46. doi: 10.1080/19313152.2021.1929762
- García, O., and Kleifgen, J. A. (2020). Translanguaging and literacies. *Read. Res. Q.* 55, 553–571. doi: 10.1002/rrq.286
- García, O., Johnson, S. I., Seltzer, K., and Valdés, G. (2017). *The translanguaging classroom: Leveraging student bilingualism for learning*. St Albans: Caslon.
- Genesee, F., and Fortune, T. (2014). Bilingual education and at-risk students. *J. Immers. Content Based Lang. Educ.* 2, 196–209. doi: 10.1075/jicb.2.2.03gen
- Goldenberg, C. (2020). Reading wars, reading science, and English learners. *Read. Res. Q.* 55, S131–S144. doi: 10.1002/rrq.340
- González, T., and Artilles, A. J. (2015). Reframing venerable standpoints about language and learning differences: The need for research on the literate lives of Latina/o language minority students. *J. Multiling. Educ. Res.* 6, 9–34.
- Gottardo, A., Chen, X., and Huo, M. R. Y. (2021). Understanding within- and cross-language relations among language, preliteracy skills, and word reading in bilingual learners: Evidence from the science of reading. *Read. Res. Q.* 56, S371–S390. doi: 10.1002/rrq.410
- Gottlieb, M. (2023). *Right from the start: Enriching learning experiences for multilingual learners through multiliteracies*. Washington, DC: Center for Applied Linguistics.
- Gough, P. B., and Tunmer, W. E. (1986). Decoding, reading and reading disability. *Remed. Special Educ.* 7, 4–61. doi: 10.1177/074193258600700104
- Grosjean, F., and Li, P. (2013). *The psycholinguistics of bilingualism*. Hoboken, NJ: John Wiley & Sons.
- Hanford, E. (2018). *Hard words: Why aren’t kids being taught to read?*. St. Paul, MN: APM Reports.
- Hanford, E. (2019). *At a loss for words: How a flawed idea is teaching millions of kids to be poor readers*. St. Paul, MN: APM Reports.
- Harry, B., and Klingner, J. (2007). Discarding the deficit model. *Educ. Leadersh.* 64, 16–21.
- Hoover, J. J., Erickson, J. R., Patton, J. R., Sacco, D. M., and Tran, L. M. (2019). Examining IEPs of English learners with learning disabilities for cultural and linguistic responsiveness. *Learn. Disabil. Res. Pract.* 34, 14–22. doi: 10.1111/ldrp.12183
- Hoover, W. A., and Tunmer, W. E. (2018). The simple view of reading: Three assessments of its adequacy. *Remed. Special Educ.* 39, 304–312. doi: 10.1177/0741932518773154
- Jozwik, S., Cuenca-Carlino, Y., and Gardiner-Walsh, S. (2020). Special education teachers’ preparedness for teaching emergent bilingual students with disabilities. *Multiple Voices Ethnic. Diverse Except. Learn.* 20, 38–53. doi: 10.56829/2158-396x-20.2.38
- Kangas, S. E. (2014). When special education trumps ESL: An investigation of service delivery for ELLs with disabilities. *Crit. Inq. Lang. Stud.* 11, 273–306. doi: 10.1080/15427587.2014.968070
- Kangas, S. E. (2020). Counternarratives of English learners with disabilities. *Biling. Res. J.* 43, 267–285. doi: 10.1080/15235882.2020.1807424
- Kendeou, P., Savage, R., and van den Broek, P. (2009). Revisiting the simple view of reading. *Br. J. Educational Psychol.* 79, 353–370. doi: 10.1348/978185408X369020
- Kieffer, M. J., and Lesaux, N. K. (2012). Direct and indirect roles of morphological awareness in the English reading comprehension of native English, Spanish, Filipino, and Vietnamese speakers. *Lang. Learn.* 62, 1170–1204. doi: 10.1111/j.1467-9922.2012.00722.x
- Klingner, J. K., and Edwards, P. A. (2006). Cultural considerations with response to intervention models. *Read. Res. Q.* 41, 108–117. doi: 10.1598/RRQ.41.1.6
- Klingner, J., and Soltero-González, L. (2009). Culturally and linguistically responsive literacy instruction for English language learners with learning disabilities. *Multiple Voices Ethnic. Diverse Except. Learn.* 12, 4–20. doi: 10.56829/muvo.12.1.886533p11t14t216
- Kroll, J. F., and Dussias, P. E. (2017). The benefits of multilingualism to the personal and professional development of residents of the US. *Foreign Lang. Ann.* 50, 248–259. doi: 10.1111/flan.12271
- Lesaux, N. K., Lipka, O., and Siegel, L. S. (2006). Investigating cognitive and linguistic abilities that influence the reading comprehension skills of children from diverse linguistic backgrounds. *Read. Writ.* 19, 99–131. doi: 10.1007/s11145-005-4713-6
- Lhamon, C. E., and Gupta, V. (2015). Dear colleague letter: English learner students and limited English proficient parents. Office for Civil Rights, US Department of Education, Civil Rights Division, US Department of Justice.
- Luft Baker, D., Park, Y., and Andross, T. T. (2023). Longitudinal predictors of bilingual language proficiency, decoding, and oral reading fluency on reading comprehension in Spanish and in English. *Sch. Psychol. Res.* 52, 421–434. doi: 10.1080/2372966X.2021.2021447



- Luke, A., and Dooley, K. T. (2009). "Critical literacy and second language learning," in *Handbook of research on second language teaching and learning*, Vol. 2, ed. E. Hinkel (Milton Park: Routledge), 856–868.
- Malchow, H. (2014). *Structured literacy: A new term to unify us and sell what we do*. Pikesville, MD: International Dyslexia Association.
- Marks, R. A., Labotka, D., Sun, X., Nickerson, N., Zhang, K., Eggleston, R. L., et al. (2023). Morphological awareness and its role in early word reading in English monolinguals, Spanish–English, and Chinese–English simultaneous bilinguals. *Biling. Lang. Cogn.* 26, 268–283. doi: 10.1017/S1366728922000517
- McCardle, P., Mele-McCarthy, J., and Leos, K. (2005). English language learners and learning disabilities: Research agenda and implications for practice. *Learn. Disabil. Res. Pract.* 20, 68–78. doi: 10.1111/j.1540-5826.2005.00122.x
- Miranda, J. L., Wells, J. C., and Jenkins, A. (2019). Preparing special education teacher candidates to teach English language learners with disabilities: How well are we doing? *Lang. Teach. Res.* 23, 330–351. doi: 10.1177/1362168817730
- Moats, L. C. (2020). Teaching reading "Is" rocket science: What expert teachers of reading should know and be able to do. *Am. Educ.* 44:39.
- Moore, B. A., and Klingner, J. K. (2014). Considering the needs of English language learner populations: An examination of the population validity of reading intervention research. *J. Learn. Disabil.* 47, 391–408. doi: 10.1177/0022219412466702
- Morita-Mullaney, T., Renn, J., and Chiu, M. M. (2020). Obscuring equity in dual language bilingual education: A longitudinal study of emergent bilingual achievement, course placements, and grades. *TESOL Q.* 54, 685–718. doi: 10.1002/tesq.592
- Musyoka, M. M. (2023). Translanguaging in bilingual deaf education teacher preparation programs. *Languages* 8, 1–21. doi: 10.3390/languages8010065
- National Center for Education Statistics (2023). *English learners in public schools*. Washington, DC: National Center for Education Statistics.
- Noguerón-Liu, S. (2020). Expanding the knowledge base in literacy instruction and assessment: Biliteracy and translanguaging perspectives from families, communities, and classrooms. *Read. Res. Q.* 55, S307–S318. doi: 10.1002/rrq.354
- Office of English Language Acquisition (2019). *English learners and instructional programs*. Washington, DC: Office of English Language Acquisition.
- Office of English Language Acquisition (2022). *English learners: Demographics trends*. Washington, DC: Office of English Language Acquisition.
- Office of Special Education Programs (2023). *OSEP fast facts: Children identified with intellectual disability*. Washington, DC: Office of Special Education Programs.
- Oh, M. H., and Mancilla-Martinez, J. (2021). Elementary schoolteachers' bilingual development beliefs and English learners' English reading comprehension achievement. *Element. Sch. J.* 122, 165–190. doi: 10.1086/716899
- Ortiz, A. A., and Robertson, P. M. (2018). Preparing teachers to serve English learners with language-and/or literacy-related difficulties and disabilities. *Teach. Educ. Special Educ.* 41, 176–187. doi: 10.1177/0888406418757035
- Ortiz, A. A., Fránquiz, M. E., and Lara, G. P. (2020). The education of emergent bilinguals with disabilities: State of practice. *Biling. Res. J.* 43, 245–252. doi: 10.1080/15235882.2020.1823734
- Ortiz, A. A., Robertson, P. M., Wilkinson, C. Y., Liu, Y. J., McGhee, B. D., and Kushner, M. I. (2011). The role of bilingual education teachers in preventing inappropriate referrals of ELLs to special education: Implications for response to intervention. *Biling. Res. J.* 34, 316–333. doi: 10.1080/15235882.2011.628608
- Palmer, D. K., Martínez, R. A., Mateus, S. G., and Henderson, K. (2014). Reframing the debate on language separation: Toward a vision for translanguaging pedagogies in the dual language classroom. *Modern Lang. J.* 98, 757–772.
- Paneque, O. M., and Barbeta, P. M. (2006). A study of teacher efficacy of special education teachers of English language learners with disabilities. *Biling. Res. J.* 30, 171–193.
- Pierson, J. M. (2024). *Structured literacy: Setting the stage for student literacy success*. Available online at: <http://dyslexiahelp.umich.edu/answers/ask-dr-pierson/structured-literacy> (accessed May 1, 2024).
- Przymus, S. D. (2023). Code-switching is metaphor, translanguaging is metonymy: A transdisciplinary view of bilingualism and its role in education. *Int. J. Biling. Educ. Biling.* 85, 1–17. doi: 10.1080/13670050.2023.2220880
- Przymus, S. D., and Alvarado, M. (2019). Advancing bilingual special education: Translanguaging in content-based story retells for distinguishing language difference from disability. *Multiple Voices Ethnic. Diverse Except. Learn.* 19, 23–43. doi: 10.56829/2158-396X.19.1.23
- Ruiz, R. (1984). Orientations in language planning. *NABE J.* 8, 15–34. doi: 10.1080/08855072.1984.10668464
- Schwanenflugel, P. J., and Benjamin, R. G. (2017). Lexical prosody as an aspect of oral reading fluency. *Read. Writ.* 30, 143–162. doi: 10.1007/s11145-016-9667-3
- Scott, L. M., and Venegas, E. M. (2017). Linguistic hegemony today: Recommendations for eradicating language discrimination. *J. Multicult. Educ.* 11, 19–30. doi: 10.1108/JME-09-2015-0028
- Seidenberg, M. (2017). *Language at the speed of sight: How we read, why so many can't, and what can be done about it*. New York, NY: Basic Books.
- Seidenberg, M. S., Cooper Borkenhagen, M., and Kearns, D. M. (2020). Lost in translation? Challenges in connecting reading science and educational practice. *Read. Res. Q.* 55, S119–S130. doi: 10.1002/rrq.341
- Shanahan, T. (2020). What constitutes a science of reading instruction? *Read. Res. Q.* 55, S235–S247. doi: 10.1002/rrq.349
- Share, D. L. (2021). Is the science of reading just the science of reading English? *Read. Res. Q.* 56, S391–S402. doi: 10.1002/rrq.401
- Shergill, G., Camozzi, H., O'Malley, M. D., and Ortiz, A. (2023). The comprehensive test of phonological processing: Measurement invariance for dual language learners. *J. Psychoeduc. Assess.* 41, 445–460.
- Spear-Swerling, L. (2019). Structured literacy and typical literacy practices: Understanding differences to create instructional opportunities. *Teach. Except. Child.* 51, 201–211. doi: 10.1177/0040059917750
- Steele, J. L., Slater, R. O., Zamarró, G., Miller, T., Li, J., Burkhauser, S., et al. (2017). Effects of dual-language immersion programs on student achievement: Evidence from lottery data. *Am. Educ. Res. J.* 54, 282S–306S. doi: 10.3102/0002831216634463
- Stevens, E. A., Austin, C., Moore, C., Scammacca, N., Boucher, A. N., and Vaughn, S. (2021). Current state of the evidence: Examining the effects of Orton-Gillingham reading interventions for students with or at risk for word-level reading disabilities. *Except. Child.* 87, 397–417. doi: 10.1177/001440292199340
- Sullivan, A. L. (2011). Disproportionality in special education identification and placement of English language learners. *Except. Child.* 77, 317–334. doi: 10.1177/001440291107700304
- Swanson, H. L., Kong, J., and Petcu, S. D. (2023). Stability of learning disabilities, cognitive growth, and L1 in English learners: A latent class and transition analysis. *J. Educ. Psychol.* 115, 379–404. doi: 10.1037/edu0000771
- Trent, S. C., Driver, M. K., Rodriguez, D., Oh, K., Stewart, S., Kea, C., et al. (2014). Beyond Brown: Empirical research on diverse learners with or at-risk for specific learning disabilities from 1994–2012. *Multiple Voices* 14, 12–29.
- Tunmer, W. E., and Chapman, J. W. (2012). Does set for variability mediate the influence of vocabulary knowledge on the development of word recognition skills? *Sci. Stud. Read.* 16, 122–140. doi: 10.1080/10888438.2010.542527
- U.S. Department of Education (2015). *Our nation's English learners*. Washington, DC: U.S. Department of Education.
- Valdez, V. E., Freire, J. A., and Delavan, M. G. (2016). The gentrification of dual language education. *Urban Rev.* 48, 601–627. doi: 10.1007/s11256-016-0370-0
- Velasco, P., and García, O. (2014). Translanguaging and the writing of bilingual learners. *Biling. Res. J.* 37, 6–23. doi: 10.1080/15235882.2014.893270
- Villegas, A. M., SaizdeLaMora, K., Martin, A. D., and Mills, T. (2018). Preparing future mainstream teachers to teach English language learners: A review of the empirical literature. *Educ. Forum* 82, 138–155. doi: 10.1080/00131725.2018.1420850
- Wagner, R. K., Torgesen, J. K., Rashotte, C. A., and Pearson, N. A. (2013). *Comprehensive test of phonological processing (CTOPP-2)*, 2nd Edn. Austin, TX: Pro-Ed.
- Wang, P., and Woolf, S. B. (2015). Trends and issues in bilingual special education teacher preparation: A literature review. *J. Multiling. Educ. Res.* 6, 35–59.
- WIDA (2003). *Mission and history*. Madison, WI: WIDA.