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Opening the Circle to Support Dyslexia Policy Success: Learning From the Voices of Literacy Teacher Educators

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Cover Page Footnote

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OPENING THE CIRCLE TO SUPPORT DYSLEXIA POLICY SUCCESS

Opening the circle to support dyslexia policy success:

Learning from the voices of literacy teacher educators

Dyslexia is a type of reading challenge that lacks research consensus related to its definition, identification, and instruction. Regardless, dyslexia laws have been enacted across the U.S. in over 40 states (IDA, 2022b). Recent legislation codifies one definition of dyslexia (IDA, 2022a). Based on this definition, state legislation mandates that K-12 educators provide literacy assessment and instruction and that higher education teacher preparation programs address dyslexia. Although some states provide room for interpretation, these mandates contribute to a disconnect between existing research and the current dyslexia policy by nature of the terminology and specific types of practices for reading that have been codified into law (Gabriel, 2018b).

A distinct and powerful narrative surrounds recent dyslexia legislation that characterizes K-12 teachers and teacher educators as out of step with its narrowly defined, rebranded definition of the science of reading (SOR) research and its impact on reading and dyslexia instruction (Worthy et al., 2016; Worthy et al., 2018b). This narrative and support for dyslexia legislation, promoted by a "closed circle" of individuals, creates an illusion backed by indisputable and "settled science" (Gabriel, 2018; Johnson & Scanlon, 2021; Worthy et al., 2017). According to Worthy and colleagues' (2017) analysis across several states, the legislation is steeped in Bakhtin's (1981) conception of authoritative discourse (AD) and promoted using distinct branding tactics identified by Gabriel (2018b; 2020). Both the AD and the branding tactics place those impacted - teacher educators and others who may question the validity of its claims - outside the conversation (Worthy et al., 2017). Furthermore, the discourse positions individuals as "experts" who complete trainings on how to use commercial literacy programs or

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those offered by organizations included within the “closed circle” of dyslexia advocates versus recognizing the breadth and depth of professional knowledge and experiences literacy teacher educators can lend to matters related to reading and all reading challenges (Gabriel, 2018; Gabriel, 2020a; Worthy et al., 2017; Worthy et al., 2018a; Worthy et al., 2018c).

Teacher educators have largely been excluded from the conversations about dyslexia legislation and silenced by how the term *science of reading* is being used across popular and social media to promote unfounded claims about reading education (Hoffman et al., 2020; MacPhee et al., 2021; Wetzel et al., 2020). In addition, their voices are not well represented within the existing research about dyslexia and dyslexia legislation (Worthy et al., 2018a). Literacy teacher educators, many of whom are reading specialists, have valuable experiences and a professional knowledge base related to teaching reading to all students, including those with a wide range of reading challenges (Worthy et al., 2018a). Including their missing voices in this critical policy initiative can help ensure its intended goals are met. This study aims to learn from literacy teacher educators and contribute to the limited number of studies that currently include their voices on this important topic and movement surrounding dyslexia legislation and policy.

Literature Review

Dyslexia

Despite decades of research on the topic, dyslexia still is not well-defined and is considered a confusing construct by many, including literacy educators (Elliott & Grigorenko, 2014; Vellutino et al., 2004). Presently, it is difficult to show where specific identifying characteristics begin or end to differentiate a child with dyslexia from a child who may be experiencing other decoding or beginning reading challenges (Stanovich, 1988; Stanovich, 1994; Shaywitz et al., 1992). Multiple definitions exist, which include similarities and illustrate

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existing nuances. Regardless, the International Dyslexia Association's (IDA, 2022a) definition of dyslexia has been included within the legislation in over 40 states, despite being vague and lacking research consensus (Johnson & Scanlon, 2020). Agreement and clarity across definitions are important as the prevalence, causes, diagnosis, assessment, and instruction of dyslexia directly connect to how it is defined.

Points of agreement about dyslexia do exist across literacy educators and other fields. There is agreement on several outdated myths, including the consensus that dyslexia is not a disease (Worthy et al., 2016) and not based on visual challenges or letter reversal (Vellutino et al., 2004). It is widely accepted that decoding proficiency occurs along a continuum, and word or letter reversal is not uncommon with beginning readers (ILA, 2016). Furthermore, an agreement exists that difficulty with accurate and fluent decoding is characteristic of dyslexia (Elliott & Grigorenko, 2014; Hruby, 2009; Kilpatrick, 2016; Peterson & Pennington, 2012; Vellutino et al., 2004) resulting from phonological processing issues (Bradley & Bryant, 1983; Elliot, 2020; Elliott & Grigorenko, 2014; Hruby, 2009; IDA, 2022a; Kilpatrick, 2016; NICHD, 2022; Peterson & Pennington, 2012; Vellutino et al., 2004). In addition, decoding and fluency challenges commonly coexist with word recall, spelling, and fluency difficulties or other co-occurring disabilities and factors that may contribute to challenges in other key literacy domains (Elliot, 2020; Peterson & Pennington, 2012; Shaywitz et al., 2008; Thompson et al., 2015; Vellutino et al., 2004; Worthy et al., 2016).

Confusion is not surprising after a review of various definitions and associated nuances for dyslexia related to causes, types, and degrees described by different researchers. Seidenberg (2017) points out that dyslexia can be *acquired* (i.e., associated with a literate person who experiences brain damage) or *developmental* (i.e., someone who experiences challenges learning

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to read). The current legislation relies on IDA's (2022a) definition and is primarily concerned with dyslexia that is *developmental* in nature. Hruby (2009) states that four different types of dyslexia exist that he indicates may vary in degree over time and that he refers to as acquired (i.e., due to brain injury), developmental (i.e., challenges with word recognition despite adequate instruction), surface (i.e., unable to recognize word forms), or pseudo in nature (i.e., genetic disorder). Pseudo-dyslexia, based on fMRI imaging results, is another type that Hruby (2009) describes as:

[d]isrupting the development of neural circuitry in the brain areas typically recruited during efficient reading development. Disparities in activation of gross areas of brain anatomy, as indicated by fMRI, cannot distinguish such abnormal cell structures.

Moreover, given the molecular- and cellular-level source of the problem, the atypical activation of gross brain anatomy identified in brain scans is often only a symptomatic, not a causal, indicator of the disorder. (p. 5)

Snowling et al. (2003) note that accurate early diagnosis is difficult given the various contributing factors of developmental dyslexia, such as neurological, family, genetic, environmental, or co-occurring disabilities.

Existing nuances related to causes, types, and degrees make identifying and assessing dyslexia challenging. Elliot (2020) describes four different types of a dyslexia diagnosis. Determination of the first type of diagnosis is similar to identifying a reading disability and is made when difficulties exist in word reading or decoding. This identification process is problematic as it results in *dyslexia* being synonymous with *a reading disability*, lacking any additional differences between the two labels (Elliot, 2020). The second type of diagnosis is a sub-group of poor decoders based on a clinician's judgment and psychological examination that

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relies on a mix of educational, cognitive, and neuropsychological measures (Elliot, 2020). This type of diagnosis is also problematic. For example, Elliot (2020) cautions that the use of environmental and economic factors to diagnose dyslexia invites subjective perceptions and raises concerns related to equity. The third type of diagnosis stems from a student's lack of progress and identification of persistent difficulties despite adequate, evidence-based instructional intervention. Elliot (2020) noted this as a "post hoc" diagnosis. It is also deemed problematic due to uncertainty around the amount of time or resistance to intervention prior to identification and other potential issues connected to a delay or lack of diagnosis. The fourth type includes what Elliot (2020) calls a neurodiverse profile diagnosis that takes into account the role of working memory, processing, attention, self-organization, oral expression, concentration, gifted characteristics, or other cognitive markers that indicate dyslexia exists regardless of whether any reading difficulties are identified or experienced. Elliot (2020) describes several problems with this type of diagnosis, including the ability of a clinician to find enough cognitive factors to build a case for dyslexia in the absence of identification of any reading challenges. The resulting diagnosis could lead to a range of work or school accommodations that may be difficult for institutions to provide (Elliot, 2020).

The current dyslexia policy initiative places a heavy emphasis on phonics instruction. It promotes using a sequential, synthetic, structured, and multi-sensory instructional approach for all students, including those identified with dyslexia (Gabriel, 2020a). The International Literacy Association (2016a; 2016b) points to findings by Mathes et al. (2005) that suggest no best method exists for teaching students with reading difficulties. Although agreement exists in support of explicit, systematic phonics instruction when working with students with dyslexia (IDA, 2016; ILA, 2016b), this is the same approach for reading instruction noted for use with all

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students within the National Reading Panel (NRP, 2000) report. However, the NRP (2000) report did not find the superiority of one specific type of phonics instruction over others (i.e., synthetic, larger unit phonics, and various phonics approaches) for teaching students to decode. In addition, claims lack research that supports the exclusive use of specific programs to teach students with dyslexia, such as Orton-Gillingham (ILA, 2016b; What Works Clearinghouse, 2022).

The lack of research consensus on a definition, specific characteristics, identification, and instructional approaches for dyslexia supports the need for more investigative efforts by researchers across fields that include evidence of effectiveness within classroom settings.

Dyslexia Legislation & Powerful Discourse

The current dyslexia legislation and science of reading movement (SOR) are promoted and surrounded by a powerful discourse. The legislation has codified specific definitions and terminology (i.e., IDA's definition for dyslexia and a narrow definition for the science of reading) that is promoted by individuals who subscribe to one particular version of dyslexia (IDA, 2022a), which is not representative of all groups' understanding and the existing research base (Gabriel, 2018). The legislation suggests that a "settled science" exists for reading instruction (Johnston & Scanlon, 2020; Shanahan, 2020), presented as the indisputable proof for the use of one approach to reading instruction – a multi-sensory, structured literacy approach with an over-emphasis on decoding (Gabriel, 2019) as backed by an outdated model of reading, The Simple View (Gough & Tunmer, 1986). The ideology of advocates and organizations who have branded SOR, commercialized specific instructional methods and claimed expertise in reading assessment and instruction overshadows actual consensus across multiple fields and research findings.

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An ideology is a system of ideas (Bahktin, 1986). Ideology, rather than evidence, is the driving force behind current dyslexia legislation, similar to a long history of other reading policy initiatives (Allington, 2005). Ideology shaped the narrative used by advocates to influence legislation intended to privatize the identification and instructional practices for literacy utilized in the general education setting and taught in teacher preparation programs (Allington, 2005; Gabriel, 2019). This ideological narrative presents structured literacy backed by the SOR as the single effective approach for addressing the needs of all students who are developing readers or experience reading difficulties, including those with dyslexia.

The narrow definition of the science of reading within the current dyslexia legislation and media is problematic and contributes to a climate of incomplete or inaccurate information (Hoffman et al., 2020; MacPhee et al., 2021; Wetzel et al., 2020). The term SOR, as used within the existing discourse, only values a specific type of research, experimental or quasi-experimental (The Reading League, 2022), and is primarily based on research that has not been conducted, proven, or validated in actual classrooms (Shanahan, 2020). In addition, much of the brain research circulated across the internet misinterprets and distorts connections between neuroscience and education (Worthy et al., 2019). Studies involving students reading words in isolation to reveal what section of the brain lights up within an fMRI may inform what earlier researchers hypothesized about the processes or parts of the brain involved with decoding. However, it does not confirm what instructional approaches are best for teaching phonics or more to hard-to-reach learners, including students with dyslexia. As previously noted, one best method does not exist for teaching students with reading difficulties (Mathes et al., 2005). Nor does one best approach exist for teaching students to decode (i.e., synthetic, larger unit phonics, and various phonics approaches), including for students with dyslexia (NRP, 2000).

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The actual text of the legislation helped shape this discourse (Gabriel, 2020a; Kress, 2003), along with branding efforts used to promote dyslexia and dyslexia legislation and policies (Gabriel, 2018b). The terminology and definition for dyslexia based on brain research are presented as "natural, verifiable, and therefore unassailable" (Gabriel, 2018a, p. 263). The discourse occurs within and is promoted by a "closed circle" of "dyslexia experts" that positions individuals outside the circle and conversation who do not know or use the same language and may even intimidate some educators (Worthy et al., 2017; Worthy et al., 2018a). The powerful discourse casts doubt and questions the knowledge of teachers and teacher educators (Worthy et al., 2017; 2018a). Although teacher educators, literacy researchers, and scholars know a lot about literacy and have contributed to the reading research base for centuries, they resisted using the term *dyslexia* due to its contested nature as a confusing and unclear construct, which also positions them as outsiders (Worthy et al., 2018a). In addition, most published research on dyslexia has been conducted outside of the classroom setting and by experts outside the field of education (Worthy et al., 2018a). The need exists to open the circle and include teacher educators in the conversation.

Worthy and colleagues (2017; 2018a) note that the recent dyslexia legislation and SOR movement are promoted by a powerful narrative that is steeped in a concept defined by Bakhtin (1981) as authoritative discourse (AD) and may intimidate or suppress alternative interpretations by educators. Bakhtin characterizes such discourse as authoritative, not flexible, and by the existence of one right way. The opposite of AD is internally persuasive discourse (IPD), which is grounded in multiple perspectives and characterized by the negotiation of meaning-making and exploration of ideas and is open to interpretation (Bahktin, 1981). AD limits room for multiple perspectives and understandings. Awareness of the two competing discourses presented by

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Bahktin (1981, 1986) and employed within previous research related to current dyslexia legislation (Worthy et al., 2016; 2017, 2018a, 2018b, 2018c) helped illuminate this research and participants' interview responses about dyslexia beliefs, efficacy, and perceptions.

Missing Voices of Teacher Educators

The majority of existing research about dyslexia has not been conducted by literacy educators, researchers, and scholars, despite their depth of knowledge and experience studying and teaching literacy (Lopes, 2012; Worthy et al., 2018a). Instead, other fields outside of education, outside of schools and classrooms, and individuals such as physicians, neuroscientists, and psychologists conducted the majority of existing studies focused on dyslexia (Lopes, 2012; Worthy et al., 2018a). The lack of research consensus on how dyslexia is defined, diagnosed, assessed, and addressed through interventions have contributed to researchers within the field of literacy and literacy education not using the term when studying reading difficulties. As noted by Worthy and colleagues (2017), the decision not to engage with the use of this label for a specific type of reading disability has placed literacy educators and researchers outside a "closed circle" of proclaimed "experts" on the topic of dyslexia and reading education. In addition, the current authoritative discourse surrounding the recent dyslexia legislation and science of reading movement further alienate the voices of literacy educators.

Worthy and colleagues (2017; 2018b) brought attention to the trend that the perspectives and voices of literacy educators who prepare teachers of reading and reading specialists are criticized and silenced by dyslexia organizations and advocates of the recent dyslexia legislation. Popular and social media also reflects this criticism of reading education (Hoffman et al., 2020; MacPhee et al., 2021; Wetzel et al., 2020). Claims are made that place literacy educators in a

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negative light, such as accusations made by Seidenberg (2017) that assert teachers are not taught effective teaching practices but instead are left to discover what to do through a constructivist-based inquiry approach, which in turn, is how they teach their students to read. Such advocacy and misleading narrative drive policy that has lasting implications for students, K-12 classroom teachers, and teacher preparation programs. The authoritative discourse surrounding the dyslexia legislation and science of reading movement discourages dissenting views (Worthy et al., 2018a), including existing research on reading and reading difficulties that can assist in helping all students learn, including those with dyslexia. Dyslexia organizations question teacher knowledge and practice for teaching reading and, by default, teacher educators' expertise, experience, and continued scholarship (Worthy et al., 2017).

There is a lack of evidence to support the accusations that teacher educators are not preparing teachers to teach reading. Survey research exists that primarily includes information about K-12 teachers' knowledge and beliefs about dyslexia (Gibbs & Elliott, 2015; Moats, 2014; Ness & Southall, 2010; Peterson et al., 2017; Wadlington & Wadlington, 2005; Washburn et al., 2014; Washburn et al., 2017). Only the study conducted by Wadlington & Wadlington (2005) included teacher educators (N=25) amongst its total participants (N=250), and findings noted that faculty voluntarily participated from the various fields represented across education (i.e., special education, speech therapy, elementary general education, secondary general education, administration, counseling). In addition, one survey (Washburn et al., 2017) found that misconceptions existed when teachers were asked about "dyslexia" but did not exist when asked about "reading disability" instead. Furthermore, survey research (Gibbs & Elliott,

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2015) and qualitative research involving interviews with K-12 teachers (Worthy et al., 2016) found that the use of labels to identify students' reading challenges (i.e., *dyslexic* and *reading difficulties*) impacted participants' sense of efficacy and contributed to the confusion. The need exists for more studies that include literacy teacher educators and goes beyond survey research to know more about their knowledge and beliefs about dyslexia, including how this may connect to teacher preparation.

The authors found two studies that involved teacher educators and dyslexia (Worthy et al., 2018a; Worthy et al., 2018b). The first study involved 25 participants, all literacy teacher educators working in teacher preparation programs in Texas (Worthy et al., 2018a). This research utilized intensive interviews and conducted the qualitative analysis using a Disability Critical Race Studies framework and Bakhtin's (1981) notion of authoritative and internally persuasive discourse to investigate participants' perspectives, understandings, and experiences of dyslexia. The majority of participants stated that distinct differences did not exist between dyslexia and other decoding challenges. In addition, they raised concerns about the mandated identification procedures.

Findings from Worthy et al. (2018a) aligned with previous studies (Gibbs & Elliott, 2015; Worthy et al., 2016) that showed teachers' sense of efficacy for teaching reading is different depending on whether the label *dyslexia* or *reading difficulties* is used. Worthy et al. (2016) attributed their findings to the authoritative discourse that surrounds dyslexia legislation. Furthermore, the majority of participants in Worthy et al.'s (2018a) study indicated that their teacher preparation programs complied with their state's legislation. However, many were critical

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of the mandates and the authoritative discourse from which they believed literacy teacher educators were excluded.

The second study (Worthy et al., 2018b), built on the first (Worthy et al., 2018a), used the same interview data and selected three cases that illustrated the range of perspectives across all participants and prominent findings from the data. Themes illustrated by the participants included: (a) their struggle with the authoritative discourse surrounding dyslexia; (b) the contradiction between their existing knowledge and confidence about working with students with reading challenges versus limited confidence for dyslexia; (c) thoughtful critiques of dyslexia construct, discourse, and politics; and (d) critical perspectives and questioning of the authoritative discourse focused on race, privilege, and dis/ability (Worthy et al., 2018b).

In keeping with Worthy and colleagues' efforts to give voice to teacher educators (2018a; 2018b), the present study sought to learn about the beliefs, self-efficacy, and perceptions related to teacher preparation and the current dyslexia legislation from colleagues working in four midwestern states. More specifically, the study asked the following questions:

Question 1: What are teacher educators' beliefs about dyslexia?

Question 2: What is teacher educators' sense of self-efficacy for teaching students with dyslexia?

Question 3: What are teacher educators' perceptions of their state's dyslexia legislation relative to their institution's teacher preparation for literacy?

Theoretical Framework and Perspectives

The authors used Bahktin's (1981, 1986) conception of two opposing types of discourse - authoritative and internally persuasive - as the theoretical framework for this research. According

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to Bahktin, authoritative discourse is characterized as absolute, static, and inflexible and promotes the existence of one right way used to intimidate or suppress alternative viewpoints. The opposite of AD is internally persuasive discourse (IPD), which is grounded in multiple perspectives and characterized by the negotiation of meaning-making and exploration of ideas and is open to interpretation (Bahktin, 1981).

The authors conducted this research embracing the perspective that there are multiple understandings of any phenomenon and that knowledge is socially constructed by individuals and their multiple social realities (Charmaz, 2000). In addition, the authors conducted their research with the recognition that a distinct discourse surrounds the current dyslexia legislation and science of reading (SOR) movement that has resulted in over 40 states across the U.S. enacting mandates related to dyslexia and literacy instruction (Gabriel, 2020a; Worthy et al., 2018a). The discourse includes the use of narrowly defined terminology such as *the science of reading* and a definition for *dyslexia* (IDA, 2022a) that has been codified into law and requires compliance of K-12 teachers and teacher educators, despite the lack of supporting research consensus (Gabriel, 2018b; Johnson & Scanlon, 2020). In addition, the language of the legislation exudes authoritative discourse (AD) that may intimidate or suppress alternative interpretations by educators (Worthy et al., 2017; Worthy et al., 2018a; Worthy et al., 2018b; Worthy et al., 2018c).

Rather than accept a discourse that casts doubt and questions teacher educators' knowledge and experiences, this study sought to understand their beliefs, efficacy, and perceptions related to dyslexia, dyslexia teaching, dyslexia legislation, and teacher preparation. Using the stated perspective and theoretical framework, the authors sought to uncover multiple understandings of this phenomenon by engaging teacher educators in semi-structured, open-

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ended interviews. This approach invites the interpretation of alternative viewpoints expressed by participants' words (Merriam, 2001).

Methods

Both researchers are former K-12 educators and certified reading specialists currently working as literacy teacher educators and researchers in two midwestern states. The discourse surrounding states' dyslexia legislation got the authors wondering what they were missing from their professional and scholarly experiences. More specifically, the authors wondered how the “new” information backed by an “indisputable” *science of reading* differed from current practices for students with reading challenges, including those with dyslexia. They voluntarily participated in dyslexia training offered to K-12 educators in their two states. They successfully completed Sopris-Voyager's LETRS/*Language Essentials for Teachers of Reading and Spelling* Part I (1-4) and Part II (5-8) participant and facilitator training, which led to more questions than answers. In addition, they informally spoke with some of their colleagues in their states and beyond. They learned that their colleagues, too, had similar questions about the implementation of dyslexia policy initiatives in several different states.

The authors reviewed the existing literature to see what they could learn. They encountered the work of Worthy and colleagues (2016; 2017; 2018a; 2018b; 2018c), which informed their understanding of the dyslexia discourse, the prevalence of survey research, and the lack of studies involving teacher educators. In addition, they learned that a limited number of existing survey research with K-12 teachers links teacher knowledge of language constructs to their teacher preparation (Worthy et al., 2018a). The authors continued to search and discovered that few studies existed about dyslexia that involved higher education literacy teacher educators as participants (Gabriel, 2018a; Wadlington & Wadlington, 2005; Worthy et al., 2018a). The

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majority of studies consisted of survey research that involved K-12 pre-service and in-service teachers, not teacher educators (Moats, 2014; Ness & Southall, 2010; Washburn et al., 2014; Washburn et al., 2017). The existing studies that went beyond survey research involving teacher educators were limited to small numbers of participants from Texas (Worthy et al., 2018a), thus representing a small number of teacher educators nationwide. The authors were motivated to learn more from fellow teacher educators. They wanted to expand the number of teacher educators' voices being heard, especially in their two states, and to learn from their beliefs and perspectives about this important topic.

The authors designed a study to learn from their colleagues, a group they perceived as left out of the dyslexia legislation movement and painted across the discourse as part of the "problem" versus the "solution." Participants included teacher educators from four midwestern states (Iowa, Kansas, Missouri, and Nebraska) working in state-approved teacher preparation programs. The study sought to include the voices of teacher educators and learn about their dyslexia beliefs, self-efficacy for working with students with dyslexia, their perceptions about dyslexia legislation, and their programs' alignment with their state's dyslexia mandates. The study took place across two phases. During Phase I (Roop & Howe, 2022), a survey was issued, and during Phase II, one-on-one follow-up interviews were conducted with a purposefully selected subset of survey respondents.

For Phase I, a database of 252 prospective participants was compiled that included at least one faculty or adjunct instructor from each institution's school of education responsible for teaching literacy education course(s). The purposeful selection of prospective participants involved reviewing biographical information, CVs, and other available information from each institution's website. During the first phase, all 252 prospective participants across the four states

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were invited by email to participate in an online survey. Sixty-three responded, making the overall response rate 25%, with Missouri represented by the most respondents (n=18).

The survey gathered demographic, and background information about each participant and their institution, followed by four open-ended questions and 30 belief statements that required a response along a Likert-scale of 1 to 5: *1 strongly disagree, 2 somewhat disagree, 3 neither agree nor disagree, 4 somewhat agree, and 5 strongly agree*. Results from the Likert-scale questions were quantitatively analyzed using descriptive statistics (i.e., frequency counts and percentages). An additional question prompted an open-ended response to the sections about beliefs and self-efficacy; the section about participants' perceptions included two open-ended prompts. Open-ended responses used qualitative methods of thematic analysis to assist with selecting prospective participants to interview during Phase II.

Phase II included purposefully selected participants from the pool of individuals who completed all items within the survey and consented to participate in a one-on-one interview. Forty-one of the 63 survey respondents consented to participate in a follow-up interview. From this pool, the authors purposefully selected 24 participants to ensure a diverse representation of participants and institutions according to 1) individual's age, gender, race/ethnicity, teaching/research backgrounds, experiences, certifications, and other credentials; and 2) university's size, location, type (private/public), and literacy courses offerings (i.e., undergraduate and graduate); and 3) varying knowledge and perspectives posed on the open-ended questions within the survey (Roop & Howe, 2022). The researchers successfully scheduled and conducted 19 open-ended interviews using a semi-structured protocol lasting an average of 45 minutes each. The researchers recorded and transcribed the interviews. Participants were randomly assigned numbers to conceal and protect their identities and ensure

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confidentiality. Interview transcripts and researchers' notes were analyzed using a combination of *a priori* and inductive analysis. Copies of transcripts were provided to participants to review for accuracy and the opportunity to submit written corrections or additions.

The authors began their analysis by looking at participants' responses to the interview questions asked within each of the three main sections by which they organized the interviews that included beliefs, efficacy, and perceptions on current and pending dyslexia legislation and their teacher preparation programs. Following several rounds of the initial analysis, they compared and discussed subcategories one section at a time and then holistically until they reached a consensus on labels for dominant themes and subcategories.

Phase 2 Findings

A Priori

The responses were analyzed using *a priori* analysis. The responses more closely align with Bakhtin's (1981, 1986) notion of internally persuasive discourse (IPD) than with his concept of authoritative discourse (AD) that surrounds the current dyslexia legislation and policy initiative. Participants' understandings of dyslexia beliefs, efficacy, and perceptions of their states' legislation and teacher preparation programs illustrated multiple perspectives that existed. Furthermore, findings demonstrated different ways participants negotiated meaning for this confusing construct (dyslexia) and the authoritative narrative surrounding their states' dyslexia policy. The findings indicated that while teacher educators acknowledged the existence of dyslexia as a reading difficulty, they did not identify specific characteristics for what determined or differentiated a struggling reader from an individual with dyslexia. This finding was consistent with the lack of existing research consensus for defining, identifying, and assessing dyslexia. In addition, teacher educators felt more confident addressing the needs of students with reading

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challenges who lacked a specific label, generally referred to as “struggling readers,” than they did working with students who experienced reading difficulties and were labeled *dyslexic*. This finding was consistent with current research on efficacy and use of the label *dyslexia*.

Furthermore, teacher educators recognized the value and quality of their university programs and how they prepared teachers to teach reading. In addition, participants identified several concerns related to teacher preparation and dyslexia legislation requirements. *A priori* findings detailed discussion follows within the sections: beliefs, efficacy, and perceptions.

Beliefs

The initial analysis of teacher educators' beliefs about dyslexia revealed consensus for the existence of dyslexia. However, teacher educators agreed that dyslexia was not present in all struggling readers. They described the characteristics of someone with dyslexia using assorted terms and referenced various definitions of dyslexia. This was consistent with findings from Phase I (Roop & Howe, 2022).

All participants expressed a belief that dyslexia existed. However, several versions of a definition for dyslexia were shared. The predominant terminology used was similar to the language found across legislation and contained common words and phrases within IDA's (2022a) definition. This finding was not surprising given various critical analyses of current dyslexia legislation (Gabriel, 2020; Worthy et al., 2017), including the branding tactics and authoritative discourse (AD) used to present IDA's codified definition as based on consensus across fields, research, and the expectation educators comply with its use. Some participants kept their definitions broad or only referenced aspects of dyslexia that reflected research points of agreement or widely accepted theories across multiple fields and studies, such as stating that dyslexia resulted from a phonological processing deficit. Those participants who challenged IDA's definition shared that they still used it as they were mandated to do but noted that the

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construct is vague and the consensus is lacking for how it is defined. All participants agreed that students identified with dyslexia are also struggling readers; however, as pointed out by one participant, "not all struggling readers are dyslexic." They acknowledged differences between the labels "*struggling reader*" and *dyslexia*. Those who accepted IDA's definition of dyslexia provided specific examples or characteristics based on the definition and a belief that it was sufficient to identify someone with dyslexia. However, these participants struggled, contradicted, or retracted what they described when asked to explain how they differentiated the characteristics of someone with dyslexia from a struggling reader. Some attempted to clarify by stating that what they described may not identify a struggling reader who experiences reading challenges not caused by dyslexia. Attempts to make the codified definition work may demonstrate participants' strong desire to comply with the legislation or a belief that the terminology and concepts referenced within the legislation are absolute, inflexible, and the one-right way.

Efficacy – For Teaching Students With Dyslexia

The initial analysis for teacher educators revealed a high sense of efficacy in working with students who experienced reading challenges. Specifically, all participants expressed confidence in working with students identified as struggling readers. Most participants expressed a high sense of efficacy regarding assessment and instructional techniques needed to work with struggling readers or those with reading challenges not specifically labeled as dyslexia. All expressed the importance of student-centered instruction, driven by assessment, including ongoing progress monitoring, and targeted to meet individual student needs.

However, some participants expressed lower self-efficacy when the term "dyslexia" was introduced. Participants who felt confident with the assessment and instruction of students with

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dyslexia attributed their sense of self-efficacy to completing training, certification, or use of a commercial program specifically marketed for working with students with dyslexia. Increased confidence levels may be attributed to the impact the authoritative discourse is having in support of various training, certifications, and use of programs specifically marketed to address dyslexia, despite a lack of evidence-based research consensus for student improvements. In addition, decreased efficacy may be explained by the literature review. It found that historically reading educators, researchers, and scholars avoided using the label *dyslexia* due to a lack of research consensus on how to define, identify, or instruct dyslexia (Worthy et al., 2017). Therefore, it is reasonable to conclude that individuals would not express high confidence levels for a construct/term they do not frequently use.

Participants who identified as either having dyslexia or being related to someone (i.e., parent, child, another relative) whom they identified as dyslexic expressed confidence related to teaching practices used to assist themselves or a relative with learning to read. However, many participants stated that they have not or were not aware they worked with someone identified with dyslexia, and most believed doing so would involve unique assessments or instructional techniques different from their existing repertoire used with students who experienced other reading challenges. Several participants stated they would defer to a "dyslexia expert" regarding which assessments or instructional techniques should be used with students with dyslexia. In addition to the previously mentioned research about reading educators' lack of use of the label *dyslexia* and its impact on their self-efficacy, these findings aligned with studies that attributed the AD of dyslexia legislation. More specifically, findings suggested a mystique surrounding dyslexia-required specialized training or approaches despite a lack of research support (Worthy et al., 2017).

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Perceptions of Dyslexia Legislation and Program Alignment

The initial analysis of teacher educators' perceptions about their program's alignment with dyslexia legislation in their state revealed that they complied with mandates, employed ongoing program enhancements, and engaged in professional learning. Most participants indicated that their teacher education preparation programs followed existing mandates. Participants identified various revisions their programs underwent to ensure compliance with state legislation. These included incorporating mandated modules about dyslexia within undergraduate courses and alignment to dyslexia-specific knowledge and practice standards (IDA, 2018).

Additionally, the initial analysis indicated that most participants perceived that strengths and growth opportunities existed within their teacher preparation programs related to how to teach students with reading difficulties, including those identified with dyslexia. They pointed to supervised practicums and field experiences as examples of strengths within their programs. In addition to perceived program strengths, several participants indicated they either proactively addressed pending legislative requirements or sought other ways to enhance various aspects of their teacher preparation programs, regardless of mandates. Furthermore, several participants engaged in professional learning opportunities beyond what was required by mandates to learn more about dyslexia, the science of reading (SOR), and specific instructional approaches (i.e., structured literacy; Orton-Gillingham, LETRS) promoted by the dyslexia legislation and SOR movement.

Some participants had limited awareness of the legislation as requirements specific to higher education were pending or existing mandates only impacted K-12 schools at the time of the interviews. The majority of participants perceived that teacher educators did not provide

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input, were excluded from the process that led to state legislation on dyslexia, and that the process was driven mainly by parents and advocacy groups.

In conclusion, the *a priori* analysis revealed that participants' dyslexia beliefs, efficacy, and perceptions of their states' legislation and teacher preparation programs more closely reflected Bahktin's (1981, 1986) notion of internally persuasive discourse (IPD) than his conception of authoritative discourse (AD). However, participants' responses reflected the AD surrounding states' dyslexia legislation and policy initiative. *A priori* analysis found that teacher educators' acknowledged the existence of dyslexia as a learning disability that impacts reading. Teacher educators agreed that dyslexia is not present in all struggling readers. Identifying someone with dyslexia was guided by the various definitions for dyslexia the participants shared, which were reflective of IDA's (2021) version codified within dyslexia legislation. While participants felt a high sense of efficacy for assessing and instructing struggling readers, some questioned their confidence when the term "dyslexia" was introduced. Others attributed their strong sense of self-efficacy for working with students with dyslexia to a specific training, certification, or commercial program they completed or used. Teacher educators perceived they complied with the current dyslexia legislation within their states. They shared ongoing improvements to their courses and programs to meet legislative requirements. In addition, some participants included ways to proactively enhance their programs to better address dyslexia as a specific type of reading challenge ahead of mandates. However, they expressed that they were excluded from the process of providing input to their state's dyslexia legislation, which they perceived as driven primarily by parents and advocacy groups, not K-12 or literacy teacher educators.

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Inductive Themes

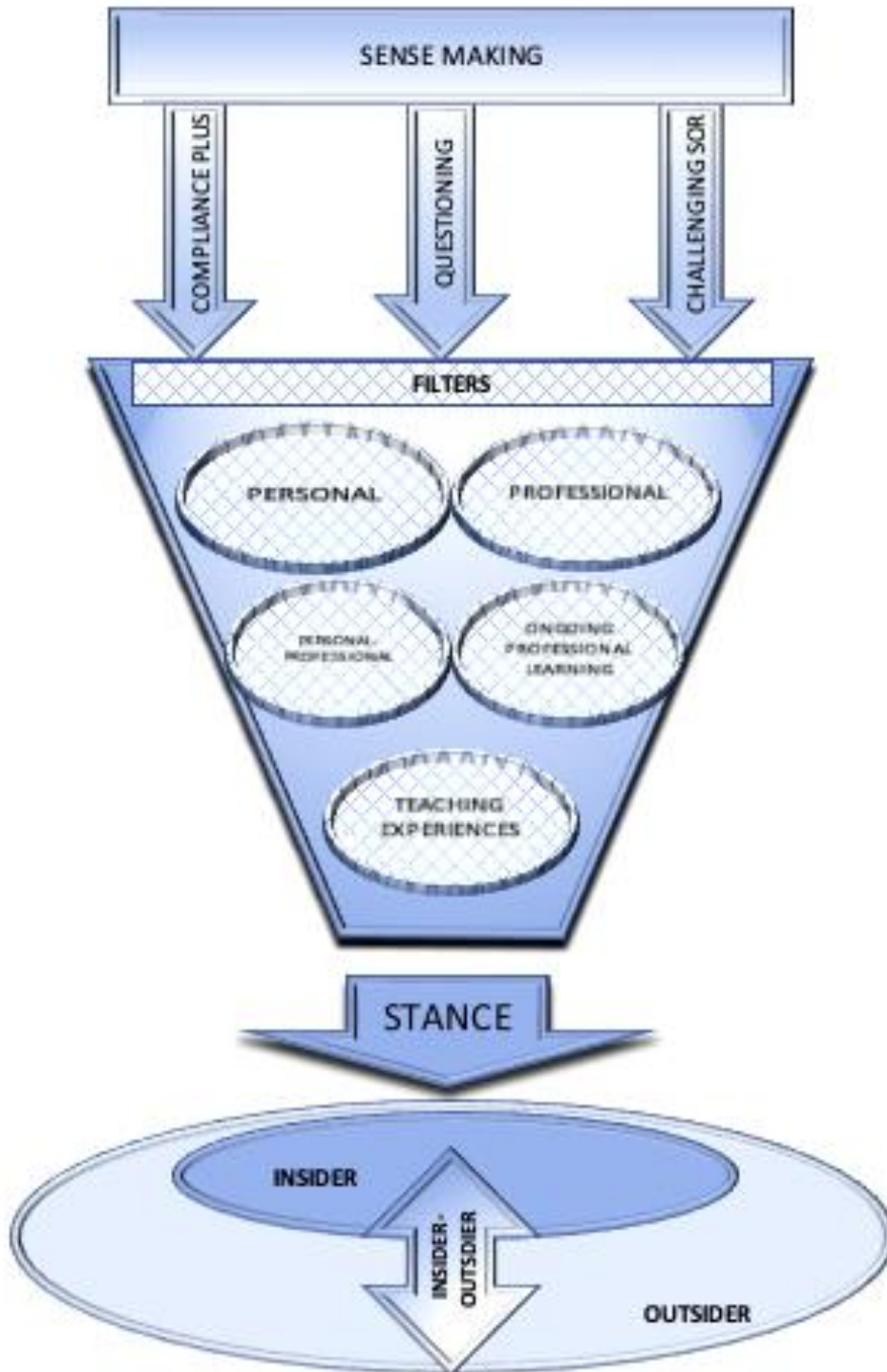
In this section, the authors present the three major themes that emerged from the data using explanations and participants' words from the interview responses. The findings include the missing voices of teacher educators within the dyslexia legislation and science of reading movement that has swept the country. Additionally, the themes illustrate the complexity of their beliefs, efficacy, and perspectives related to dyslexia and dyslexia legislation. Similar to the *a priori* findings, the inductive themes that emerged from participants' responses more closely aligned with Bahktin's (1981, 1986) conception of internally persuasive discourse (IPD). In addition, the authoritative discourse (AD) surrounding states' dyslexia legislation and policy initiatives influenced participants' responses in various ways. Responses ranged from favorable, to questioning, to challenging the authoritative discourse; therefore, the scope of responses supports this study's theoretical perspective that multiple understandings of any phenomena exist, and knowledge is socially constructed by individuals and their multiple social realities (Charmaz, 2000).

The themes that emerged from the findings illustrate (see Figure 1) how participants negotiated a topic that is not clearly defined and a movement and legislation from which teacher educators largely were excluded. The themes help explain teacher educators' multiple understandings of this phenomenon and more closely align with one of the two opposing types of discourse as conceptualized by Bahktin (1981, 1986) used as the theoretical framework for this research - internally persuasive discourse (IPD) versus the authoritative discourse (AD) promoted by the legislation.

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Figure 1

Teacher Educators' Negotiation of Dyslexia Policy Initiative



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The major themes in this study that give voice to teacher educators and help explain their beliefs, efficacy, and perspectives are *sense-making*, *filters*, and *stances*.

Sense-Making

A major theme that emerged from the analysis of interview transcripts is "sense-making." Participants engaged in a complex process to make sense of the science of reading (SOR), dyslexia, and dyslexia legislation in their states. Participants expressed cooperation with legislation, but their responses included ways in which they went beyond compliance in their teacher preparation programs and extended to questions and challenges they posed about the disseminated and mandated information. It was evident from participants' responses that simply complying with their state's mandates was not enough for them or their students to make sense of this historically confusing construct. Complying with existing dyslexia legislation was easy. Understanding how dyslexia fits within the larger body of existing reading research and informed reading instruction and teacher preparation was far more complex. Thus, the need for compliance and understanding triggered participants to engage in a more nuanced process of sense-making as expressed through what the researchers labeled as "compliance plus," which involved: seeking clarification, asking questions, challenging, and identifying barriers.

Compliance Plus. Participants expressed how they complied with their state's dyslexia mandates within their teacher preparation programs "plus" some. Their responses indicated that compliance with existing mandates, while easy enough to achieve, included aspects that needed to be better defined or not without challenges relative to the legislation's intended goals.

"Compliance plus" responses illustrated participants' desires and commitment to quality reading

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instruction within their teacher preparation programs beyond what the mandates addressed for students with dyslexia and those experiencing other reading challenges.

Examples of ways participants complied with mandates ranged from (a) the use of the definition for dyslexia published by the International Dyslexia Association (IDA, 2022a) and alignment with IDA's (2018) *Knowledge and Practice Standards* across course content; (b) incorporation of state-sanctioned modules into their pre-service programs that addressed the science of reading and dyslexia; (c) use of documents that outlined the guidelines for assessing, identifying, and instructing students at-risk or identified with dyslexia; and (d) participation in for-profit commercial publisher's training about dyslexia and reading instruction such as Voyager Sopris' *Language Essentials for Teachers of Reading and Spelling* (LETRS).

While discussing ways they complied with mandates, several participants addressed aspects that needed to be clarified and, as a result, confusing or frustrating to them. One participant stated, "The state legislation isn't as specific as it could be . . . It's pretty open and so now what do we do? . . . There's no real guidelines." (P15, p.5). Another participant shared a specific example, "They said the science of reading must be taught but they did not specify what that meant." (P10, p. 9).

Lack of specificity created confusion and made compliance more difficult, as reflected in this participant's remarks about the lack of state guidance relative to the introduction of a new dyslexia endorsement:

So far, they haven't specified what it will all include. They have specified that any program that wants to offer it has to be approved. So, what does that mean, you know?

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I'm just very confused. It would be so much more helpful if they had specific, you know, things they wanted us to teach and if it was clearly laid out rather than saying, 'Oh, you need their approval,' and it's like, okay, help us here so we can arrange an endorsement that will meet their approval. (P10, p.8)

Ironically, for an initiative promoted as “proven” and based upon the “science of reading,” its lack of specificity of key components created a perception amongst participants that policymakers were “building a plane while flying it.”

The researchers interpreted examples of barriers shared by participants that made compliance challenging as the realities of teacher preparation and knowledge of the complexity of teaching reading rather than as resistance to mandates or opposition to dyslexia. For example, several participants noted the limited number of courses currently devoted to reading instruction within teacher preparation programs and the challenge presented by dyslexia mandates of adding more information to already packed courses. As expressed by one participant, "Every course that we offer is just packed, you know. So, then it becomes an issue of do we cover a mile wide and an inch deep or do we dig deeply into issues such as dyslexia? So, that's a big challenge." (P1, p. 5). Other participants further illustrated the challenge of "expecting pre-service teachers or brand-new teachers to really get all the stuff for dyslexia [when] . . . they're still just getting how to teach." (P3, p. 6). Another participant echoed a similar sentiment stating, “We cannot cram any more into their brains for that level of training . . . and I think, what are we going to take out . . . because we have to put this in?” (P2, p. 8).

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Despite believing the mandates have the potential to help address dyslexia, participants believed much more was needed to adequately address all students who struggle with reading, including those with dyslexia. In addition, they believed that the mandates needed contextualization, which they, as teacher educators, were doing. One participant's remarks exemplify this sentiment:

I feel like our state mandates are very specific but not necessarily helpful. And, by that I mean, for instance, they want all of my students to take a dyslexia training module, and I do, I absolutely comply with that, but the module takes my students about an hour and it's a quick overview of dyslexia and I'm not sure how beneficial that actually is. Whereas I feel like I delve much more deeply into that; I help my students to understand, especially students getting a reading endorsement or special ed. Do you know, 'What does dyslexia look like? What does the struggling reader look like?' And so, I feel that the legislation is helpful, but it's just the tip of the iceberg. (P10, p. 8)

In another example, a participant shared how they incorporated the state-mandated dyslexia modules into their teacher preparation classes that concluded with a question to students about readiness to teach reading:

We introduce ILA's position statement . . . then the IDA position statement . . . We talk about the legislation . . . and how it's tied to screening assessments . . . Then, the definition of dyslexia . . . and research or publications not founded on research . . . I always ask my students when they finish the module, 'Do you feel prepared to teach students who are diagnosed as dyslexic now? NO? Yeah.' (P5, p. 8)

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The question was intended to probe their students' sense-making of the state-mandated dyslexia module. However, it illustrates one way in which this teacher educator engaged in the sense-making of the mandate. They challenged its value and spotlighted the need, with the use of sarcasm, for providing more context around how to address reading and individuals who experience reading challenges, including those identified as dyslexic.

Questioning (Tentativeness About Dyslexia Label and the Mystique of Dyslexia

Experts). Making sense of beliefs, efficacy, and perceptions about the science of reading (SOR), dyslexia, and related legislation extended beyond complying with state mandates. Throughout the sense-making process, important questions were raised, which showed how the nature of their inquiries impacted participants' knowledge and beliefs. Responses of note fell into two main categories that included questioning: 1) the use, understanding, or experience with labels specific to dyslexia versus a struggling reader, and 2) the type of instruction advocated or mandated for use with students identified with dyslexia versus other struggling readers. Participants expressed specific beliefs and knowledge about dyslexia when they questioned labels and the type of instruction necessary to help students who experience challenges in reading. Participants' responses underscored issues with the label *dyslexia* and highlighted their beliefs about student-centered reading instruction.

Participants' responses were consistent with prior research findings that indicated the impact on teachers' and teacher educators' confidence with use of labels, such as "struggling reader" or "dyslexic" (Gibbs & Elliott, 2015; Worthy et al., 2016; Worthy et al., 2018a; Worthy et al., 2018b). Participants' responses illustrated that their sense of efficacy was impacted by which label was applied when speaking about teaching students identified as dyslexic or about

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preparing teacher candidates to teach reading to individuals with dyslexia. Consistent with existing research, efficacy decreased when referencing the label *dyslexia* but increased when using the terminology *struggling reader* (Gabriel, 2018; Gibbs & Elliott, 2015; Worthy et al., 2016; Worthy et al., 2018b). Illustrative of these findings, one participant shared, “Even having a label of dyslexia makes me think – gives me pause – to think, ‘Do I really understand how that is different for [teaching] my students sitting in front of me?’” Conversely, this participant also shared that they had confidence “to address the needs of struggling readers, “[b]ut under the label of dyslexia, I don’t know that we would be able to come up with something that we would do differently.” (P5 p.4). This response was also consistent with research findings specific to the authoritative discourse used across recent dyslexia legislation (Worthy et al., 2018c). It alludes to the belief that “experts” exist who possess knowledge and experience that specifically qualifies them to work with students with dyslexia, despite any research support for such claims. Another participant shared:

I usually relied on a special educator who had more direct knowledge of how to teach students with dyslexia. I would say I had lots of struggling readers that I dealt with over my teaching career, but I only had a few students who have been diagnosed as having dyslexia... I would say I'm not particularly qualified to teach those students. I certainly could look up some strategies if I needed to, but my default would be to engage with the special education teacher who's been more thoroughly trained in dealing with dyslexia and other processing disorders and work with them. (P11, p. 3)

Another participant demonstrated a similar belief held by other literacy teacher educators - that a mystique surrounded what dyslexia assessment and instruction looked like and only was known

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by and the responsibility of dyslexia “experts.” They stated, “If you're asking me, ‘How do I differentiate between dyslexic reader and struggling reader,’ I would have to consult with someone that I would consider to be an expert in dyslexia or someone that is certified to do dyslexia diagnosis.” (P8, p. 4)

Surprisingly, only one participant stated that a diagnosis of dyslexia did not need to be performed by medical personnel and cited the International Dyslexia Association (IDA) as support for the assertion. The statement was presented as fact rather than a belief when speaking about a specific school district's reluctance to use the term dyslexia because the district believed it required a medical diagnosis. Participant 15 emphatically stated, “That's not true. Since 2000, you can and should use the term dyslexia, and you do not need a medical diagnosis. . . they’re [the district is] worried that there’ll be an over identification of kids and saying that they are dyslexic and they’re really not. So, they are concerned about that, but a medical diagnosis is not the answer.”

When probed regarding who should make the diagnosis, [Participant 15] replied, “According to IDA and [named their state’s department of education], it would be a, it can be a reading specialist, a speech-language pathologist, a psychometric examiner. I think there’s a list of some other people that have that expertise that are experts in that area.” As they continued to speak, their response further revealed their belief about the medical diagnosis for dyslexia and why seeking one was not necessary. They shared, “. . . way before our legislation got passed, I would say this to students who had kids, ‘Go and ask your pediatrician how they diagnose dyslexia,’ and they came back and said, ‘Well, they laughed at us and said, if the schools say

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they're dyslexic, we'll sign the paper.' They [pediatricians] don't know. They don't know what dyslexia is. So [requiring a] medical diagnosis was, was sort of the way, I think, to block an overdiagnosis of dyslexia."

Challenging – Science of Reading (SOR). Several other participants engaged in sense-making by challenging various aspects of the dyslexia policy initiative, including specific terminology and how the research was used to promote this policy initiative. Participants' challenges served as evidence of strong perspectives that the science of reading, structured literacy, and related research were narrowly defined, part of a powerful discourse that privileged some individuals and practices and did not match their existing beliefs.

One participant shared how she introduced the dyslexia modules to contextualize the discourse surrounding it. She believed the information shared was not necessarily accurate, and an agenda was behind it. She explained:

And so, then we get into the science of reading, which I say is as exact as medical stuff science because it drives me crazy, and you probably can't put that in there but to say that there is a path, and if you take that path and all students will be successful is not my experience. It took me a while to get there, but I thought [about] how can I get them to understand the first day when we teach these articles about the science of reading that there is an agenda behind them and that they need to understand it if you're that narrowly focused, you're going to miss out." (P18, p. 1)

Another participant noted, "I'm always really curious when people talk about the science of reading [and] what they're actually talking about" (P11, p. 1), suggesting that this term, like

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dyslexia, and depending on whom you asked, lacked consensus or that there was an agenda behind its use. Other participants pushed back on how SOR was narrowly defined, and their responses indicated awareness of an agenda behind its promotion and use. For example, Participant 10 stated, "So I guess I don't really like that term [science of reading] because I do feel like balanced literacy also has science behind it, but I'm using that term because that's what they like to promote." (P10, p. 2). When asked to clarify whom they meant by "they," Participant 10 indicated "they" meant "dyslexia advocates." The realization that it was not beneficial for teacher educators to place themselves outside the "closed circle" of dyslexia "experts" and "advocates" promoting the current dyslexia movement and legislation was consistent with sentiments noted by Worthy and colleagues (2017).

Recognizing the exclusion of K-12 teachers and teacher educators from this "closed circle" of dyslexia legislation advocates, Participant 10 stated she would advise K-12 educators, "to keep learning, keep reading both sides of the research" and shared the belief that it was necessary "to look and to understand different perspectives." Most participants' beliefs exemplified the importance of embracing a broad research base and multiple perspectives.

Participant 17's comments served as evidence of this sentiment. They captured how such beliefs underpinned what teacher educators challenged as they strove to make sense of the current dyslexia movement and mandates. In reference to the term *science of reading*, Participant 17 stated, "I think it's been owned." They went on to explain while challenging how it was used:

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The idea of the science of reading is a strong idea, and I think that despite some appropriation by specific people or specific groups, the general idea I truly believe in is that we do have a better understanding of the process of reading, especially the basic processes involved in reading. More than any other learning phenomenon, because we have the longest history, studied this for 120 years more seriously as a research endeavor, not just something we observe, and therefore, we know a hell of a lot about reading. So, I think it's highly appropriate to talk about the science of reading. It's highly appropriate to talk about many things that we do know about reading. That being said, sometimes people appropriate the idea of a science of reading and say this is the science of reading, and this is the only part of the science of reading, and this is what we understand . . . And so that's the challenge that I'm seeing with owning - who owns the science of reading? There's quite a bit of evidence out there. There is very strong research out there. There are very strong indicators out there, but they are not as simple as some people are trying to make them." (P17, p. 2)

In addition to challenges to how *the science of reading* was defined and who and how a “closed circle” of advocates was “owning it,” participants pushed back on whether information disseminated as part of the dyslexia movement should be considered research. This sentiment was consistent with the findings of Worthy et al. (2017) and Gabriel (2020b) that traced references to reports and “research” around a loop of dyslexia “experts” that cited one another instead of referencing actual study findings in support of the information advocates promoted. Participants' remarks illustrated that teacher educators recognized this practice of circular self-

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reference of citations and the resulting vacuum that excluded them and other key literacy groups and researchers from a “closed circle” of self-proclaimed “experts.” Furthermore, their response challenged the “science” disseminated in support of the dyslexia legislation and science of reading movement:

There are some other advocacy agencies. I'm not sure what to call them, who produce their own research, which is not peer-reviewed, and so I know that gets put out in the media as reading research. But I think that just a layperson would not understand that it is not peer-reviewed. It's all done by the same corporation. Not even [a] corporation, [rather] advocacy group." (P5, p.1)

Participants made sense of the dyslexia movement by challenging narrowly defined terminology and unproven research claims. Their responses also indicated their program's steps to address the impact of the authoritative discourse surrounding dyslexia and SOR. One participant stated, "I think it's really interesting how we talk about the science of reading. Now we get a lot of press inquiries about whether we're teaching the science of reading. I've done quite a bit of reading on that." (P14, p. 2). Another participant shared that they were reading up on SOR and joined a podcast they saw on Facebook called "Science of Reading What I Should Have Learned In College." They remarked, "It's kind of a movement. It's pushing out Whole Language and Balanced Literacy" and that "It's all about decoding in the early grades" (P4, p. 2).

Several other participants recognized and challenged the over-emphasis dyslexia advocates place on phonics instruction. One participant noted they believed it was "limiting if they [advocates] are only thinking about phonics instruction" and noted, "they may miss out on

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some other strategies that can help engage students" (P14, p. 1). In addition to challenging an over-emphasis on phonics, participants were concerned with using structured literacy lessons for all students or all students identified with dyslexia. One participant trained in Orton-Gillingham years ago expressed excitement about a blog they followed as they hoped it would discuss the importance of structured literacy or structured language processing. They liked how the blog started but soon became concerned with the information shared and challenged the suggested use of structured literacy with all students. (P13, p. 2). Another participant used the terms *science of reading* and *structured literacy* interchangeably. They challenged its "one size" approach and noted what it lacked:

The science of reading has a very scripted path that you must take for all students, and that's why I have a huge problem because there's nothing about language, there's nothing in it about the joy of speaking and listening and playing with language and learning the nuances and having fun with rhyming words. And we did jump rope in class earlier in the semester because I wanted them to get the rhythm of the syllables and the nursery rhymes that they would say while they were jumping rope. There needs to be play with language, and I don't see any play in the science of reading." (P18, p. 3)

Other expressed challenges included issues with the process used for dyslexia identification and the exclusive focus on this one type of reading difficulty. One participant attempted to make sense of why there was a singular focus on dyslexia in the following response:

There are so many issues that could be addressed that interfere with a student's ability to develop reading skills. For example, ADHD . . . yet it's interesting to me that our focus

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has suddenly become on this one area of reading challenges. So much so [that] we are now required to train our students on how to support a student. Not that there's anything wrong with that, but I do think that there are so many other areas that we could focus our attention on. It's just interesting that this particular challenge for students is becoming the focus right now. (P1, p. 1)

Equity issues were at the heart of several challenges raised by participants about dyslexia identification, label, and services. For example, one participant stated, "When you think about education, and you think about equity, and if we're looking to serve our students who are struggling with reading and we're implementing all of this legislation, who's left out of it? Who's left out of those services? (P5, p. 1). Similar findings in earlier research involving teacher educators and dyslexia raise concerns about practices that disproportionately identify or separate low-achieving, economically disadvantaged, minority students (Worthy et al., 2018b).

The participants' responses collectively illustrated the layered way in which teacher educators made sense of their existing beliefs, efficacy, and perceptions of dyslexia knowledge, practices, and current dyslexia legislation. Findings were consistent with previous research that investigated the missing voices of literacy teachers and literacy teacher educators' beliefs and more as they relate to the recent wave of dyslexia legislation (Worthy et al., 2016; Worthy et al., 2018a; Worthy et al., 2018b; Worthy et al., 2018c).

Filters

Two primary filters influenced participants' beliefs, efficacy, and perceptions as they made sense and formed a stance about dyslexia and recent legislation. Responses reflected how participants' personal and professional backgrounds and experiences informed this theme.

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Information disseminated as part of the powerful discourse surrounding participants' state legislation and the dyslexia movement flowed through these two primary filters (personal and professional).

Personal Experiences (Self & Relatives). Participants were quick to share their personal experiences and connections with dyslexia. The authors classified "personal" experience as someone who self-identified as dyslexic or had an immediate family member, such as a parent, spouse, child, or grandchild, identified with dyslexia. Participants noted their personal connections right away, and their passion for the subject was evident. Without hesitation, the first words shared by Participant 2 were, "I am dyslexic, my dad is dyslexic, and two of my three daughters are dyslexic. So personal experience is a huge part of it, and prior experiences with growing up going through school being dyslexic and clear through to now [at] my doctorate level being dyslexic, plus raising children. That was a whole different level of experience with dyslexia." (p. 1).

Sharing personal connections to dyslexia revealed its influence on participants' understanding of the term and explained participants' attempts to assert credibility on the topic. Participants reflected awareness of research consensus for a strong genetic tie to dyslexia through repeated references to dyslexia across different generations within families. (Hruby, 2009; Peterson & Pennington, 2012; Thompson et al., 2015). However, participants with personal experiences with dyslexia did not always express an accurate understanding of where research consensus exists. For example, one participant shared beliefs and personal experiences related to a daughter that involved print moving on the page as she read. They believed using color overlays during reading instruction was the key to their daughter's reading success. This belief is inconsistent with research consensus that indicates causes and characteristics of dyslexia

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are not related to vision, letter or word reversal, or print movement. (Elliott & Grigorenko, 2014; IDA, 2016; ILA 2016a; Vellutino et al., 2004).

A response by Participant 3 illustrated how their passion for the topic stemmed from their personal experience with their own child's struggles learning to decode. The participant recalled being a classroom teacher for 18 years, accustomed to working with students who could not read. However, upon learning their child struggled to decode nonsense words, they reacted, "Oh, heck no. My kid is NOT the second percentile," and credited this event as influencing their decision to learn more [about dyslexia] "because [their son was] a very smart kid and he just didn't have the phonics to get it accomplished." (p. 1). Later in the interview, they credited a local, private learning center that is known for working with students with dyslexia as what "changed [their] son's life" and the reason why they agreed with current dyslexia advocates' charge that "we need to do something different." (p. 7).

Personal-Professional. The authors initially classified all experiences participants referenced as part of their work in K-12 schools when serving as classroom teachers or reading specialists, and from higher education as teacher educators, as "professional" influences. However, as the authors further analyzed participants' responses, they noted personal experiences mixed in with teacher educators' professional influences. Therefore, the researchers decided to classify the professional influences as either "professional" or "personal-professional." The labels established a distinction between those influenced by their work with a student identified as dyslexic (i.e., "personal-professional experience") from those lacking or unaware of first-hand experiences working with someone identified as dyslexic. The authors noted that all participants voluntarily indicated whether they worked with someone identified as dyslexic. Several noted they sought out opportunities to work with a student identified as dyslexic to gain specific

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experiences with this type of reading challenge and understand how it was different from working with students who experienced other reading difficulties.

Professional Experiences. Several participants acknowledged how the field evolved since their training as reading specialists or earning their master's or doctorate degrees. They noted the shift from the degree name of "reading" to "literacy" and its intent to reflect a broader understanding of the concept and field. It was not uncommon for participants to add context when speaking about the period when they trained as reading specialists and elaborated on their thinking regarding their roles and responsibilities related to dyslexia. Participant 8 noted both the name used for her advanced degrees (reading versus literacy) and dates when the degrees were earned (2003 and 2015) before stating:

So, given those time periods. . . I would have to consult with someone that I could consider to be an expert in dyslexia or someone that is certified to do dyslexia diagnosis . . . because I myself don't feel like I have - I'm qualified to make that kind of observation or decision. . . but then again when I went to school...the school of thought back then was it really doesn't matter if a student is struggling or dyslexic or both . . . the strategies that are good for one are good for all . . . the message is very changed from 2003 to now. (p. 4).

Not only did the participant's comments reveal that they believed their training program impacted their role and qualifications relative to diagnosing dyslexia, but it also aligns with the literature review. Reading educators, researchers, and scholars have avoided the use of the term dyslexia within their research and practices, sticking to the use of a broader umbrella term, reading difficulties, instead, due to the lack of research consensus for how dyslexia is defined, diagnosed, assessed, and addressed through interventions (Worthy et al., 2017).

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Worthy and colleagues (2018a) asserted within their research conclusions that teacher educators are highly qualified to work with all students who experience reading challenges, including those with dyslexia, by nature of their extensive training and experiences teaching reading. Gabriel (2018) noted that such training and experiences go beyond knowing how to implement a specific commercial reading program recommended for use with students with dyslexia, such as Orton-Gillingham or Wilson Reading. The authoritative discourse surrounding dyslexia legislation considers training in such programs as qualifying criteria to be deemed a dyslexia expert. (Worthy et al., 2018c).

Other participants pointed to their professional backgrounds, a combination of degrees, and professional experiences and identified what contributed to their high confidence levels in working with students with dyslexia. Participant 5 immediately identified "my training" as a factor that contributed to their sense of confidence in teaching students with dyslexia, then continued:

So having, holding a reading endorsement. My clinical training not in dyslexia but in working with students with reading difficulties. My experience – my classroom experience of over 15 plus years. My role as an instructional coach. My role as a literacy teacher. And then also my professional development, especially around the Response to Intervention, systems training, and assessments. Careful observation and insane curiosity about students. (p. 3).

This same participant also pushed back at the narrative surrounding teacher educators' role and dyslexia. The narrative suggests that teacher educators either are not knowledgeable about SOR and dyslexia or related practices do not match their existing beliefs. More specifically, they responded to critics who blame teacher educators for not teaching K-12 teachers about dyslexia

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or using the science of reading (SOR) to train them to teach reading adequately. This participant said, "I guess I would throw it back to their argument. How do you know that I'm not? I mean, what evidence do you have that I'm not doing that?" (P5, p. 8). In addition, they shared their reasons for becoming a teacher; their deep level of care and commitment to helping all students learn to read; their involvement in conducting original research and staying abreast of current and emerging research; and their confidence in and dedication to preparing K-12 teachers to be able to help all students achieve their "right to become a reader" (p. 8).

Depending on the timeframe of one's academic training, the current legislation disrupts many teacher educators' existing beliefs. It challenges the notion that dyslexia is outside the K-12 educators' or reading specialists' wheelhouse and requires a medical diagnosis. Many participants stated they were not trained to specifically address dyslexia and acknowledged that they needed and welcomed training to learn more. In general, and as a result of the codification of one definition for dyslexia and other terminology included within dyslexia legislation, many participants perceived research consensus now existed for the definition of dyslexia and best practices to teach someone identified with dyslexia. In addition, several participants perceived that dyslexia diagnosis, assessment, and teaching were somehow new or different from their existing knowledge and training for working with students who experienced reading challenges. The field of reading education historically resisted using the term or label *dyslexia* due in part to a lack of clarity around how this construct is defined and a lack of specific characteristics that differentiate a reader with dyslexia from others who experience similar or other reading challenges (Elliott & Grigorenko, 2014; Vellutino et al., 2004; Worthy et al., 2018a). However, the authoritative discourse surrounding the legislation and its codification of a specific definition led many participants to question their existing knowledge and training and believe clarity,

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consensus, and specific characteristics to differentiate dyslexia from other reading challenges now exist.

In addition to how or when a participant was trained, existing policies or special education practices dictated who, if, and how students were identified with dyslexia. Several participants noted their background and training in reading education and provided context for past beliefs and practices. One participant shared:

Well, it may be this is partly my age. We would have a child study team, and then when a child wasn't reading well, dyslexia was kind of a dirty word, you know, we weren't testing for dyslexia. We couldn't even say that a kid was dyslexic or even, you know, ponder, could this be it? Could this child be dyslexic because it wasn't one of the protected classes that you could put them in SPED for, you know. It was just kind of you didn't talk about it. (P3, p. 2)

Another participant linked the time in which they were trained to how they approached working with a struggling reader versus someone identified as dyslexia by stating, "So back then, when I went to school, it didn't really matter if the student is struggling or dyslexic or both," because practices thought to be, "good for one are good for all." (P8, p. 4)

Ongoing Professional Learning. The professional experiences included another distinction worth noting. Most participants mentioned some form of professional learning as an influencer on their definition and understanding of dyslexia. The type of and motivation for professional learning about dyslexia varied. The motivation ranged from self-initiated as part of participants' ongoing personal, professional learning within the field of literacy to compliance with state-mandated training. Whether participants self-initiated the professional learning or complied with a state training requirement, many expressed that their actions were partly

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motivated by the recent legislation and the public's increased interest in the topic. Some participants noted they increased what they were already reading about the topic as part of their ongoing efforts to stay current in the professional literature. They actively sought more information because they noticed "dyslexia" was becoming a hot topic in both literacy and public education.

The type of professional learning mentioned ranged from reading professional books or research articles to seeking experiences with specific trainings (i.e., LETRS/Language Essentials for Teachers of Reading and Spelling, CERI/Certified Structured Literacy Teacher) and instructional programs (i.e., Orton-Gillingham, Wilson Reading, Lindamood-Bell) associated with dyslexia. Again, some voluntarily read books and articles, participated in trainings, and sought to learn about specific programs. Others participated in specific professional learning training or learned various instructional programs to comply with specific mandates. Participants made specific references to researchers and authors of professional texts or active across popular or social media that they were reading or following, such as Louisa Moats, Carol Tolman, David Kilpatrick, Sally Shaywitz, Natalie Wexler, Emily Hanford, Mark Seidenberg, Hugh Catts, Alan Kamhi, and Stan Dehaene. Participants referenced trainings, programs, researchers, and authors dominated by names widely shared and endorsed by dyslexia advocates and state policy initiatives. The researchers and authors represented individuals primarily outside the field of education, specifically reading or literacy education, and were inclusive of other areas such as medicine, speech-language, journalism, psychology, and cognitive or neurosciences.

Participants referenced both the International Literacy Association (ILA) and the International Dyslexia Association (IDA) as professional organizations that influenced their current definitions and understandings of dyslexia and the science of reading (SOR). When

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probed to see if participants read *The Reading Research Quarterly* (RRQ) first special edition on the science of reading (SOR) (Goodwin & Jimenez, 2020), five said “yes” or indicated they were aware and intended to read it. Fourteen said “no” or indicated that they were unaware of it or did not reference the special edition as an influence on their definitions and understandings.

However, most participants voluntarily indicated their awareness of advocacy groups’ involvement with current dyslexia legislation, referenced seeing or hearing information shared via Facebook groups or other forms of popular and social media, and perceived both as driving and influencing the increased interest in dyslexia and the science of reading.

One participant (P16), a self-described “self-learner in dyslexia,” stated regarding their state’s dyslexia legislation, “I felt like we didn’t know enough about dyslexia. So, I went in search of more information. I went to a couple of workshops...I participated in Orton-Gillingham...I’ve gotten every book I could get my hands on, and presently, I’m tutoring a little boy that’s nine years old and in the third grade that has been diagnosed with dyslexia.” (p. 1). This participant’s willingness to learn more and filter new information through their existing personal and professional knowledge was not uncommon. In general, participants expressed a willingness to learn, compare, position, or what the authors referred to as filter what they discovered through their existing personal and professional experiences with dyslexia and working with students with reading challenges.

Many participants elected to attend LETRS or other popular dyslexia-trainings such as Orton-Gillingham prior to or in the absence of state-mandated training for teacher educators. The authors interpreted taking the initiative to attend various dyslexia training or going beyond mandates as teacher educators’ desire and willingness: a) to know more about dyslexia instruction; b) to compare practices presented as “proven” and aligned with “the science of

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reading" against their existing knowledge and practices for working with students who experience reading challenges; c) to explore information and practices that might enhance their existing teacher preparation programs, and d) to be involved in a policy initiative that has primarily silenced their participation and input. Such initiative illustrates how teacher educators reframed the mandates as an opportunity to enhance what they are already doing. One participant's remarks captured this sentiment. They stated:

Instead of looking at those recommendations or requirements as limits, I've tried instead to look at them as maybe a gateway. And then, I've tried to delve more deeply.

So, I think that in that way, I've tried very hard to shape our program so that it's not limited by that terminology [dyslexia]" (P10, p. 9).

Teaching Experiences – Emphasis on Student-Centered Reading Instruction.

Regardless of which label was assigned to a reader, *dyslexic* or *struggling*, the majority of participants made a point to note the importance of student-centered instruction, which their professional training and experiences influenced. One participant stated when talking about curriculum labeled for use with dyslexia, "I'm never a fan of that, as I said before, because I think it's really the teacher in their analysis and diagnosis and what they feel is good for each student where they are [and not a specific curriculum]." (P8, p. 12).

Yet, responses also served as evidence for teacher educators' belief that they know and use a range of practices that work. In addition, they train K-12 teachers to do the same as part of their teacher-preparation programs, such as how to provide one-on-one data-driven instruction, observe kids, and engage in student-centered assessment and instruction. The same participant noted this as a strength of their teacher preparation program and stated:

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Personalizing and individualized instruction and doing that by positioning the teacher as the expert to personalize individualized instruction. We get that from principals that hire recent grads. 'They're so prepared to make accommodations to really tailor and personalize, not just individualized, not just differentiate, but truly personalize learning.'

(P8, p. 12)

Another participant shared advice they would pass along to K-12 educators in light of mandated dyslexia assessments that echoed the importance of student-centered assessment and instruction. They made sense of their state's dyslexia legislation and highlighted the priority to help all kids learn to read:

I would hope educators would make sure that they're carefully watching students. That they're paying attention to the screening data. That they're using diagnostic assessments to determine exactly what the students need. And make sure that they understand that just because they have a student that has struck out on an assessment, it's not going to pinpoint what the student needs. Even though they are required by the state to progress monitor, it's probably not based on what the student needs, so they're going to have to jump through extra hoops and create their own assessment or find another assessment to do their own progress monitoring to determine if a student is actually making progress.

(P5, p. 6).

Stance

Ultimately, the authors noticed that participants fit within one of three stances, depending on their position and role within the dyslexia movement in their state. Examination of participants' responses about their beliefs, sense of efficacy, and perceptions about dyslexia

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legislation revealed whether their stance was within the category of either an “insider,” “outsider,” or “insider-outsider” within the dyslexia movement.

Insider. The authors assigned the "insider" stance to participants who expressed a personal connection (i.e., self or relative) to dyslexia, were involved in some way with their state's policy initiative (i.e., training, assessment), and/or identified their primary professional background, training, or experiences with an area outside of reading education (i.e., special education, speech-language). The majority of "insiders" recognized and embraced the science of reading (SOR) as defined by advocates and individuals working within the "closed circle" (Worthy et al., 2017) of associations and fields represented within the dyslexia movement. Participants labeled as "insiders" shifted away from a broader understanding of what constituted reading research and accepted with few questions a narrowly defined view of "science," including one theory, *The Simple View* (Gough & Tunmer, 1986), that they believed explained reading acquisition and instruction as presented within the SOR-dyslexia movement. “Insiders” considered themselves a part of the SOR movement. They believed that the SOR and information disseminated about dyslexia was new, evidence-based, consensus-based, and the ultimate authority on reading research and pedagogy guiding the legislation.

In addition to fully subscribing to how the SOR was defined, this group of participants felt empowered and embraced the AD of the legislation. "Insiders" spoke with authority. One participant described the shift they experienced as a former first-grade teacher using a "hodgepodge of a lot of things" to later using "systematic, explicit" phonics instruction to teach students to blend CVC words. They stated, "I know that the science works. I've seen it work." (P6, p. 4). Not only did "insiders" feel empowered by the AD of the legislation, but they also had a voice and agency within their state's policy initiative. Participants assigned an "insider" stance

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played some role within their state's legislation oversight or mandates (i.e., served on select committees developing state tests for reading or reading specialist certification; contributed to the creation of mandated dyslexia modules for use in teacher prep programs; coordinated or delivered required dyslexia training).

The authors attributed “insiders” willingness to embrace their state’s dyslexia legislation with limited questions or reservations to the fact they perceived themselves as “authors” who had voice and agency due to their privileged roles/involvement in various aspects of this initiative that was otherwise closed to teacher educators. So, unlike the majority of the other participants and their fellow teacher educators who were excluded and silenced throughout efforts that brought about the recent wave of dyslexia legislation, the “insiders” were empowered by their involvement in their state’s initiative and spoke with authority.

Most "insiders" noted they completed various dyslexia or structured literacy training, which they expressed contributed to their sense of efficacy with dyslexia. A study conducted by Worthy et al. (2018c) also found that participation in dyslexia trainings increased the confidence levels of dyslexia interventionists and had "a transformative effect on their professional identities." (p. 375). Many trainings identified by participants were the same ones endorsed by the "closed circle" of perceived dyslexia and SOR experts or "sanctioned" by various states' dyslexia initiatives. One "insider" referenced several phonic-based programs (i.e., Sunday Phonics, Corrective Reading, Orton-Gillingham) they believed contributed to their confidence working with students with dyslexia and endorsed two of them by stating they "show pretty high correlations with students" (P6, p. 5). This same participant noted the value of working one-on-one with students and the need for intensive instruction for students with dyslexia. In addition, this "insider" was proud of an additional certification he or she completed that they believed to

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be more beneficial than LETRS. They described LETRS as a "framework" that is "highly effective." However, they believed their participation in the structured literacy training was superior and one they thought their colleagues would benefit from learning. They shared, "I recently was certified through the Center for Effective Reading Instruction as a certified structured literacy teacher, and that training was invaluable. It's recommended and endorsed by the International Dyslexia Association." "Insiders" expressed a strong connection to and reliance on IDA guidance. Thus, they saw their professional identity within the dyslexia legislation movement as closely aligned with IDA, as an expert on reading and SOR. They were critical of other positions about what constituted research and evidence-based approaches for teaching reading.

Outsider. In contrast, the authors assigned the "outsider" stance to participants who questioned the novelty of SOR and were skeptical of its narrow scope as provided by advocates and fields outside of education. Participants identified by an "outsider" stance were consumers of research who negotiated its value and sought to understand to whom it would be best applied. One participant explained, "We can help every child, and we need to look at their individual needs and help them each individually because, to me, the biggest problem is if you put them all into one category of dyslexia, you know, that's where I have an issue" (P6, p.4).

While this group acknowledged compliance with mandates, they also critically challenged how SOR is narrowly defined. They contextualized the complex nature of reading and the reader. They accepted an additive approach rather than a single method for acquiring and teaching reading. They placed the SOR narrative within a larger context of research and practice that is known and needed for effective reading instruction. In the words of one participant,

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[We should] know both sides of research, understand different perspectives, keep an open mind, and don't dig [our] heels in with "this is what we've always done attitude ... I think one thing we need to know is to keep learning, keep reading both sides of the research, rather than just where's your background. I think we need to look and understand different perspectives with an open mind, rather than just digging [our] heels in and arguing for the sake of what we've always done--I think that's huge. (P10, p.10)

Outsiders felt advocates and fields outside of education scrutinized their prior knowledge and experience with reading theory and pedagogy. This group expressed that their voices were left out of the process that resulted in their state's dyslexia legislation. In addition, they felt they did not have agency within the current policy initiative. One participant shared, "I was made aware of it at the point where it was being presented to a committee, or something like that, at [the] state legislature" (P10, p.10). Participants assigned this stance identified as being on the sidelines during the shaping of dyslexia legislation. They felt they could not contribute to the legislation and its effects on reading education for K-12 teachers and teacher preparation programs. This belief is consistent with other assertions that teacher educators lacked representation (Worthy, 2018a) and were criticized and silenced by dyslexia organizations and advocates of dyslexia legislation (Worthy et al., 2017; Worthy et al., 2018b). The outsider stance also supports findings by Worthy and colleagues (2017; Worthy et al., 2018a) that the authoritative discourse surrounding the legislation excluded certain stakeholders from participating in the discourse and the process of guiding dyslexia legislation.

Insider-Outsider. The third group's stance was labeled "insider-outsider" because they shared characteristics with the other two groups. "Insiders-outsiders" did not fit neatly into just one stance. Participants identified by this stance felt they had some voice and some degree of

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agency because they, too, were included in some aspect of the legislation or were identified as having a personal connection to dyslexia (i.e., either self or relative identified with dyslexia). Examples of their involvement ranged from inviting legislators to campus to observe how institutions were preparing teachers to teach reading, working with state departments to create mandated dyslexia training modules, serving on state department committees to help develop new tests required for reading education or reading specialist certification; and adding a dyslexia certification program at their higher education institution. Despite being described as "insiders" due to their involvement with some part of their state's policy initiative or having a personal connection to dyslexia, these participants kept one foot "outside" the circle and did not fully embrace the legislation as is or the surrounding discourse without questioning and challenging certain aspects.

Overall, "insiders-outsiders" embraced the spirit of the legislation but were not afraid to challenge specific aspects. For example, they believed the AD discourse surrounding dyslexia legislation was counterproductive. In addition, they felt a more collaborative tone across the entire scientific community, and throughout this policy initiative would lead to more constructive progress and attainable classroom application for teaching reading. One participant reflected on the historical and critical lenses professional organizations used to view reading that brought about earlier shifts in perspectives that were evident again within the current SOR discourse. The participant referred to a split that occurred in the 1990s within the Literacy Research Conference (LRC), more recently known as Literacy Research Association (LRA), and stated, "those aligned with 'all the hard quantitative, morphologically, phonologically-inclined people' went to the Society for Scientific Studies of Reading and the rest kind of stayed within LRA." The participant noted that LRA "seems to be at that juncture again where they're doing a lot of

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cultural and social justice, and there's less and less reading research [on the fundamentals] presented and such." These phenomena "[has] been the story of the field, to a certain degree. Some people are going really narrow. Some people are trying to widen. But sometimes, it starts steering [in] a direction that's not helpful." (P17, p.3).

Similarly, another "insider-outsider" worried that they were back in the nineties fighting the reading wars again and was concerned by the "my way or the highway" tone that the discourse surrounding the dyslexia legislation took (P13, p.1). This participant shared that she believed in their own research and experiences that yielded positive outcomes for students with dyslexia and other reading challenges using structured, small groups, or one-on-one instruction. In addition, they shared that they believed in multi-sensory instruction and structured literacy but also found success through other programs and approaches, such as Reading Recovery and Success for All, not supported across the current AD discourse. They found the discourse concerning.

"Insiders-outsiders" challenged other aspects, including the *dyslexia* label. One participant employed a critical perspective when they expressed concerns with how this label was used then and now. They noted, "dyslexia is when white middle-class kids can't read. And that was for a very long time what that really meant. . . We were saying, 'What was the garden variety?' Low readers really. It was black kids, and it was brown kids, and poor white kids who couldn't read, because obviously, *they* couldn't read, [and] that was 'fine.' So there's, there's the discomfort there that the organization has never fully, I think, discussed." (P17, p.6). Worthy et al. (2018b) also found in their research that teacher educators questioned the use of the label *dyslexia*, specifically in ways that were consistent with a DisCrit perspective that called into question its use according to race, class, or perceived intelligence.

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"Insider-outsiders" complied with SOR and dyslexia legislative requirements but also identified challenges they faced within their education preparation programs to meet the mandates. One "insider-outsider" perceived their program was doing a good job preparing students to teach reading, credited existing field experiences as a program strength, but also questioned the ability to add more to address the SOR and dyslexia mandates given their current program demands and completion requirements. When asked if they believed their program was currently doing a good job preparing teachers to teach reading, they responded:

I think we do, but there's not enough time in the day to do it all. We [have] a big field-based component; we have a really strong field base. Our students start out at, they do 90 hours during their literacy block, 90 hours during their content block, and 90 hours in their advanced block, with the additional 45 hours in the clinic. So they do a lot of experiential learning and, in addition to their student-teaching, obviously. So, I feel like our students are prepared. But what do you give up to do that? (P13, pp. 12-13).

In addition to identifying challenges their programs faced meeting their state's mandates, such as finding enough time to add more to existing program requirements, at least one participant critically questioned the value of enacting dyslexia legislation altogether. They illustrated why narrowly defining the science of reading was problematic, as was legislating a solution for teaching reading given the permanence of laws and the continuously evolving nature of science and research. They stated:

[It] goes beyond reading. I'm really struggl[ing] with legislating the details of education because ... for a variety of reasons. But at the heart of this is, it is because you legislate with something that we know at that moment. But the legislation stays forever. It's much harder to undo legislation than to legislate. Once it's there, it's much harder to undo. And

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the problem is the research keeps moving, right? And the way we think keeps changing. And the one piece we didn't touch here, and I think it's important to bring up, reading itself changes. The task of reading in the last 20 years, because of technology, has, in some ways, transformed. And so research from 50 years ago, it was fantastic for that time and place. And once you legislate that, you're stuck with that for a very long time because legislators don't like un-legislating... it's legislating something we don't necessarily have the evidence for. And legislators don't say, oh, there's a preponderance of evidence. They can take one study or two and a strong advocate, and their granddaughter who had a problem reading or a granddaughter who teaches for Orton-Gillingham and say, "this is what everybody should learn; this solves everything." (P17, pp. 9-10)

Participants described as "insiders-outsiders" shared many characteristics with other participants, including the many ways they engaged in sense-making. They went beyond compliance and identified barriers, asked questions, and challenged, even critically challenged specific aspects of the mandates, dyslexia, and the science of reading. They also used their personal and professional experiences to filter information related to dyslexia and SOR. Like the other participants, they expressed a willingness to improve. While they admitted that there were challenges that come with change, they recognized too that there was a need, as shared by one "insider-outsider," to "constantly [shift], and you've got to balance these things out. So, it is a challenge, it is a tension in everything that we do. But I think we're up to the task, but there's still work to be done" (P17, p.13). What set them apart from "outsiders" was that they possessed privileged roles/involvement in various aspects of this initiative that were otherwise closed to teacher educators, and/or they identified themselves or one of their relatives as dyslexic. Unlike participants labeled as "insiders," the "insider-outsiders" did not speak with the same tone or air

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of authority. The authors attributed what "insider-outsiders" shared, albeit with great confidence, to their breadth and depth of professional knowledge and experiences gained over time, and not from this one moment in time, involvement in this current initiative, or training in a specific program or method. The need to develop a professional knowledge base versus the ability to be trained as a technician to deliver a specific program was identified by Gabriel (2018a) as an important goal for literacy professionals, especially in light of the current discourse and rhetoric of the current dyslexia legislation.

Conclusions

Most studies related to dyslexia are conducted in fields outside of education and are not connected to literacy instruction (Shanahan, 2020; Worthy et al., 2018a). The current lack of research consensus around dyslexia, including its definition, identification, assessment, and instruction, has contributed to a reluctance by literacy education researchers, scholars, and teacher educators to use the term *dyslexia* as part of their centuries-long work in the area (Worthy et al., 2018a). As a result, despite knowing a lot about reading instruction and contributing to a better understanding of reading challenges, including dyslexia, their work is largely unrepresented throughout the recent dyslexia legislation. In addition, the surrounding authoritative discourse places them outside the "closed circle" of dyslexia "experts" making decisions about reading education. (Worthy et al., 2018a, 2018b). More research is needed so that the voices of literacy teacher educators are included and can help guide the implementation of existing dyslexia policy mandates and inform future legislation.

Current and emerging studies involving brain imaging are fascinating and provide excellent information about the neural pathways and areas of the brain involved in the reading process. However, the researchers conducting these studies and others agree that this line of

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research is still evolving, and more information is needed, especially since existing findings do not inform literacy instruction. (Dehaene, 2009; Seidenberg, 2017; Shanahan, 2020). Worthy et al. (2019) encourage educators to understand the benefits and limitations of existing neuroscience studies to avoid the spread of misinformation and understand more broadly factors that influence literacy learning. This caution is significant given the profusion of dyslexia research focused on the brain that is available online and because most of it is conducted outside the field of reading education (Worthy et al., 2019). Given all of this, it is vital to consider the work of literacy education researchers and scholars as part of the recent dyslexia legislation and science of reading movement. Doing so will broaden teachers' understanding of literacy instruction for students who experience challenges learning to read, including those identified with dyslexia.

These research findings illustrate that teacher educators are complying with existing dyslexia legislation in their states. They are engaged in sense-making, using their rich and varied backgrounds and experiences with literacy instruction as filters to understand the information being disseminated about dyslexia and as part of their state's dyslexia legislation. The authoritative discourse associated with dyslexia legislation impacts teacher educators' professional stance as they negotiate an understanding of this historically confusing construct and the related policy initiative. This study's findings support those of Worthy et al. (2018a), which indicate that the use of the dyslexia label results in teacher educators questioning their preparation and sense of efficacy in teaching students to read, despite expressing confidence and having a wide range of knowledge and experiences working with students facing reading challenges.

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The authors are disappointed by the impact of the authoritative discourse surrounding the current dyslexia legislation and the science of reading movement. They are concerned it promotes a narrow view of reading and one “right” way. If not expanded to encompass the voices of others with different perspectives and include information and terminology based on actual research consensus as well as value findings from studies conducted within the field of reading education, this current policy initiative will lack critical information that can contribute to helping all children learn to read.

Similar to the teacher educators in the study conducted by Worthy et al. (2018a), the participants in this study are well prepared to work with all students, including those identified with dyslexia, given their backgrounds, experiences, and ways in which they approach reading instruction. The participants in this study are well trained, with extensive professional knowledge bases, and have valuable experiences across K-12 classrooms and instructing teacher candidates and educators at the university level. They use and teach others to use a wide range of assessment and instructional approaches versus only knowing how to implement one way or a particular program. Study participants expressed beliefs in and described using a student-centered, data-driven approach to teaching reading. Like Worthy et al. (2018a), the authors consider teacher educators experts because of their training, experience, and approach to teaching reading. Furthermore, they possess a professional knowledge base that can be utilized for success when faced with different variables or contexts. This expertise compares to individuals prepared as technicians who, according to Gabriel (2018a), face limitations and are trained to address all readers and reading challenges by implementing a program or employing the same approach regardless of the child or circumstances.

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Teachers and teacher educators have a common goal with parents: to help their children become successful with reading and literacy so the benefits can spread across all aspects of their children's lives and throughout society. Working with parents, legislators, teachers, reading specialists, special educators, speech-language pathologists, occupational therapists, physical therapists, teacher educators, and other stakeholders allows the opportunity to draw from multiple perspectives and approaches for the improvement and development of readers. It contributes to greater success, ensuring students are not only efficient at foundational reading skills (i.e., reading words) but are also able to derive meaning from text, comprehend at high levels, and engage in critical thinking. Participants in the present study identified a variety of ways they engaged in ongoing professional learning that includes a willingness to know more about dyslexia and work with others for the literacy success of all students.

Many participants in this study are certified reading specialists who formerly worked in K-12 school settings. Reading specialists are well-versed in multiple perspectives and approaches helpful in addressing the needs of striving readers and students with dyslexia. Although schools and districts are not required to hire reading specialists, they are required to hire a special education teacher or speech-language pathologist, or other education professionals who also have specialized endorsements and licenses that qualify them to work with students on an IEP, including students identified with specific reading difficulties. The authors support other education professionals learning more about reading to enhance their existing knowledge and skills. Reading specialists have a great depth and breadth of knowledge about reading instruction. The authors strongly recommend that multidisciplinary student-support teams include reading specialists. Reading specialists can offer valuable support to teachers and other

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school personnel specific to reading instruction or provide targeted assistance to students with or without an IEP who experience reading challenges, including those with dyslexia.

The study participants, all teacher educators, and many certified reading specialists express support for multiple perspectives and approaches to serve the multifaceted needs of readers, including students with dyslexia. They are lifelong learners and continue to add to their repertoire of instructional methodologies, including cognitive psychology frameworks and models. They recognize the importance of seeking and incorporating information from other fields outside reading education into their professional knowledge bases and practices, including how findings from continuously evolving neuroscience studies may inform them. Participants' professional knowledge bases, teaching experiences, spirits for embracing multiple perspectives and approaches, and efforts to engage in ongoing professional learning that is committed to learning how best to support all students' reading success suggest teacher educators are well-positioned to contextualize and best implement the recent dyslexia policy mandates. Gabriel (2018b) notes that many states' legislation leaves room for interpretation. It is essential to go outside the current echo chamber of the "closed circle" of existing dyslexia discourse and include teacher educators' voices to avoid using information and terminology that is confusing or lacks research consensus.

The authors encourage other researchers to continue with this line of research and expand the number and voices of teacher educators from across the country so all can continue to learn from their perspectives given current dyslexia and the science of reading movement. Drafting or proposing new or revised dyslexia legislation should include teacher educators' voices. Implementation of dyslexia policy mandates should include teacher educators to ensure student success.

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Limitations

These findings build on the information shared by Worthy and colleagues (2018a). Still, they only represent a small sample of teacher educators' voices in the four midwestern states involved in this study and nationwide. Thus, the study findings cannot be generalized across all teacher educators in these four midwestern states or other states. Interviews were conducted with a total of 19 participants, which is only a small sample of the many diverse voices of teacher educators and is a limitation of this study.

Although each of the states involved in this study had some form of dyslexia legislation in place and lots of similarities existed across and with other states throughout the U.S., they were each different and at different stages of implementation. The existing or proposed mandates that specifically mentioned higher education varied. So, unlike the research conducted by Worthy and colleagues (2018a) involving teacher educators from one state, Texas, this study's participants worked in four states and were not required to comply with the exact same mandates. This difference should be taken into account when considering the findings. However, it is interesting to note that despite being in various stages of implementation and having different mandates, dominant themes emerged that still inform understanding of teacher educators' beliefs, efficacy, and perceptions of dyslexia and the current dyslexia legislation.

Implications

The legislation at the time of this study involved mandates specific to K-12 schools and K-12 public school teachers in all four states, which had implications for teacher educators and reading instruction. Teacher educators are responsible for the preparation of K-12 educators, both at the undergraduate and graduate levels and play an essential role in helping them understand and contextualize the mandates for which K-12 educators must comply. The

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authoritative discourse of the existing state legislation and its lack of research consensus may intimidate K-12 educators and prevent them from using other practices that may better serve their students (Worthy et al., 2018c). Adding teacher educators' voices to the existing dyslexia legislation narrative is important, so narrowly defined mandates do not limit K-12 educators. Furthermore, the narrative promotes one-size solutions and often mentions the use of for-profit supplemental education services and commercial programs that could suppress actual reading instruction provided by educators who possess a professional knowledge base and ability to flexibly address or respond to student needs or the specific context as differences arise (Gabriel 2018a, 2020).

Having the results of this study available in combination with existing research specific to teacher educators (Worthy et al., 2018a), while calling for more, expands the existing perspectives represented within the legislation, helps inform the current dyslexia policy initiative's intended goals and to help ensure adequately prepared teachers to serve all students with high-quality literacy instruction. In general, leaving out any key stakeholder group from the legislative process is problematic. Omitting or ignoring the voices of key stakeholders such as teacher educators is troublesome because they are charged with preparing teachers to teach students to learn to read but also because it ignores a wealth of invaluable information that could be used to help achieve the intended goal.

If literacy teacher educators want to avoid being excluded from future education policy initiatives or want to find ways to open the "closed discourse circle" (Worthy et al., 2017, p. 414) surrounding the current dyslexia legislation and be heard, there are steps they can take and areas in which they need to actively and intentionally do a better job. First, there is a need not to ignore or resist this level of engagement. The fact that dyslexia legislation exists in some form in all 50

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states (IDA, 2022b) is impressive and did not happen by chance. Teacher educators should reach out to individuals who advocated to bring about the existing dyslexia legislation, including parents and policymakers. They should listen, seek to understand their perspectives, and find ways to ensure the success of shared goals – well-prepared teachers teach reading, and all students learn to read. In addition, they should find more ways to partner with parents, especially those who feel their children have not been well-served by public education. Furthermore, it is critical to partner with policymakers so they know what literacy teacher educators are doing to prepare teachers and recognize ways teacher educators can assist with literacy policy solutions, rather than be unaware and craft legislation based on a flood of letters they receive from the best-organized advocacy group or loudest voice in the room. The authors point to efforts described by a participant in this study as a positive example of how to engage policymakers that resulted in lawmakers coming to their university to observe their work preparing teachers to teach reading within a reading center setting (P17, pp. 10-11). The lawmakers observed, questioned, and learned specific ways the narrative did not match what they witnessed.

In addition to reaching out, listening, seeking to understand, and partnering with parents and policymakers, literacy teacher educators need to find ways to communicate better what the field of reading education has done for decades, despite being portrayed as constantly at war with one another. That being, continue to accept and learn from multiple perspectives, research, and practices across various fields that share an interest in language and literacy learning (i.e., speech-language, cognitive sciences, neurosciences, special education). In short, teacher educators should make it known that they embrace an additive approach and welcome the opportunity to learn from other fields to address students' diverse reading needs. This approach includes a willingness to become more knowledgeable and gain more skills for reading

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instruction for students with dyslexia. The authors know several literacy teacher educators, including several study participants and both authors, who take issue with the current dyslexia discourse and its characterization of Balanced Literacy as a synonym for Whole Language that ignores the science and does not include the explicit, systematic teaching of phonemic awareness or phonics. However, the authoritative nature and adversarial branding approach of current dyslexia and SOR movement placed teacher educators outside a "closed circle" of "experts," cast doubts on their knowledge, questioned their beliefs, put many of them on the defensive, or silenced them so that alternative understandings were not communicated or heard (Worthy et al., 2017; Worthy et al., 2018b). It is imperative for literacy teacher educators to put aside hard feelings, rise about the narrative, and find ways to gain entry inside the "closed circle" so they may contribute to the conversation.

The time is now for literacy teacher educators to be bridge builders. Borrowing from Gabriel (2018a) regarding engagement in advocacy and policy related to literacy instruction and intervention, teacher educators should "create discursive bridges between conflicting ideologies," and "describe principles in practice, not just practices or principles, and certainly not brands" (p. 267). Teacher educators can do this by focusing their messaging on points of agreement, including, as noted by this study's participants, the fact that they acknowledge dyslexia exists, and teacher educators desire to prepare all teachers and reading specialists, so they are well-prepared to meet the needs of all students and all reading challenges. There are many ways that teacher educators can value-add. An important way, as noted by Worthy et al. (2018a) and supported by this study's participants, is for teacher educators to provide the opportunity for teacher candidates to understand and discuss different perspectives. Teacher educators can contextualize incomplete information and research that lacks consensus across fields and

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perspectives. Contextualization is important so teacher candidates understand the danger of one-size-fits-all approaches and programs for reading and the value of developing a professional knowledge base that they can employ given whatever variables or contexts they encounter. This study demonstrates that teacher educators embrace ways to enhance their work. They have a breadth and depth of knowledge that positions them to contextualize new and emerging research, different perspectives, and various approaches when teaching teacher candidates about reading instruction. They should seek ways to build bridges with various stakeholders with different viewpoints and understandings so they, too, know this to be true.

Lastly, like Worthy et al. (2018a), the authors believe others should continue to engage in research to contribute to existing gaps related to dyslexia, especially by conducting work within schools and classrooms to help inform the sciences of reading instruction. In addition, the authors encourage teacher educators to write or share what they learn from their research or the research of others using alternative mediums, rather than exclusively publish in academic journals that primarily only reach or are read by other higher education colleagues. When doing so, and as suggested by Worthy et al. (2018a), teacher educators need to check their discourse to ensure it is jargon-free and respectful of other viewpoints.

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