

Beyond Monolingual Reading Assessments for Emerging Bilingual Learners: Expanding the Understanding of Biliteracy Assessment Through Writing

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ABSTRACT

Emerging bilingual learners' biliteracy abilities are often underestimated when monolingual reading assessments, such as the DIBELS, are used to identify students as having difficulties in learning or to guide literacy instruction. The authors propose a holistic form of biliterate assessment that uses writing as a means to understand what emerging bilingual learners actually know about literacy. In this qualitative study, the authors raise serious concerns about using DIBELS and question its adequacy for measuring literacy skills for students in the early and intermediate stages of English-language development, as well as its limitations in providing relevant information about students' biliteracy. Through qualitative analysis of three sets of writing samples collected from 29 second-grade students, the authors illustrate the biliteracy skills and abilities that these students possessed holistically across Spanish and English. The students selected for this study were identified by DIBELS scores as reading below or well-below benchmark. However, through the qualitative analysis of their writing, the authors were able to document the students' literacy understandings across languages in their second-grade year through the organization of their written texts, change in sentence constructions, and alphabetic skills knowledge. This work is significant to the field of bilingual and biliteracy instruction in that biliterate writing assessment provides a means to understanding developing reading skills that is broader in scope and is appropriate for assessing the totality of emerging bilingual learners' biliteracy development.

There are currently five million children who enter U.S. schools knowing more than one language (Office of English Language Acquisition, 2017). Of these children, 80% speak Spanish and English. It is not uncommon for emerging bilingual learners¹ in both monoliteracy and biliteracy contexts to be assessed using monolingual normed reading assessments. Nor is it uncommon for reading to take priority over writing in formative assessment activities. A widely used reading assessment is the Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good & Kaminski, 2002), a formative English reading assessment that is used in over 20% of U.S. elementary schools (Center on Teaching and Learning, n.d.-a).

DIBELS reading assessment measures reading development by assessing the five essential components of reading as determined by the National Reading Panel: phonemic awareness, phonics, vocabulary, fluency, and comprehension (National Institute of Child Health and Human Development, 2000). The makers of DIBELS purport that with six 1-minute assessments, DIBELS has the power to predict a student's reading development and progress (Flurkey, 2006). DIBELS assessment was created with the assumption that students, both monolingual English and emerging bilingual, learn literacy along the same continuum, and therefore, instruction must follow an identified sequence so students will learn and be able to demonstrate these skills with automaticity. DIBELS has been criticized for contributing to the implementation of reading programs with limited reading curriculum in low-income schools. Furthermore, DIBELS is also responsible for students not having access to high-quality texts (Teale, Paciga, & Hoffman, 2007). A federal evaluation of the entire Reading First program concluded that programs and assessments such as DIBELS have had a significant impact on student decoding but not "on student reading comprehension test scores in grades one, two or three" (Gamse, Jacob, Horst, Boulay, & Unlu, 2008, p. xv). It is noteworthy that these results are likely exacerbated for emerging bilingual learners.

In this article, we argue that reading assessments, such as DIBELS, are invalid forms of assessing emerging bilingual learners because literacy acquisition is fundamentally different for this population of learners and monolingual English learners.² We further argue that these assessments often underestimate what emerging bilingual learners know about reading, thereby resulting in reduced opportunities to learn, including expensive reading interventions.³ We demonstrate how formative biliterate writing assessment illuminates what students know and can do, unlike the DIBELS and its Spanish equivalent, *Indicadores Dinámicos del Éxito en la Lectura* (IDEL; D.L. Baker, Good, Knutson, & Watson, 2006), which only demonstrates what students do not know. Finally, assessing emerging bilingual learners only in English when they are participating in bilingual instructional programs only measures part of what they are learning about biliteracy (Escamilla et al., 2014; Grosjean, 1982; Hopewell & Escamilla, 2014; Valdés & Figueroa, 1994).

Our purpose in this study was to examine how a biliterate writing assessment might offer a more authentic, valid, and asset-based understanding of emerging bilingual learners' reading development than the DIBELS or other similar assessments. This study is important given the ubiquitous use of DIBELS and its Spanish counterpart, IDEL, particularly in school districts with large numbers of emerging bilingual learners. One research question guided this study: To what extent can biliterate

writing assessment provide deeper insight into students' biliteracy development than a commonly used reading assessment like DIBELS?

Conceptual Framework and Review of Literature

The conceptual framework for this article includes theories from several areas of literacy acquisition and assessment as they relate to emerging bilingual learners. Research to support our argument is organized around three themes: (1) the ways in which literacy acquisition differs between emerging bilingual and monolingual English students and how instructional programs and assessments need to consider these differences, (2) how writing assessment may better illuminate students' emerging knowledge of literacy than current skills-based monolingual English reading assessments, and (3) the holistic theory of bilingualism.

Literacy Acquisition Differs Between Emerging Bilingual and Monolingual Learners

Although emerging bilingual learners share some similarities with monolingual English learners in their acquisition of literacy, there are major differences that need to be considered (for an overview, see Table 1). Monolingual English students are acquiring initial literacy in the only language that they know. They are exposed to English, often exclusively, both inside and outside of school. Their reading programs and assessments have been developed for them, and their language (English) is the language of status, power, and prestige in and out of school.

Literacy acquisition is quite different for emerging bilingual learners (Bernhardt, 2003; Escamilla et al., 2014). Spanish-English-speaking emerging bilingual learners are often in communities and contexts where Spanish and English are used both in and out of school. Fundamental to understanding this difference is our growing understanding that bilingual learners use all of their linguistic resources when producing and interacting with text (García, 2009; Gort, 2012; Hopewell, 2011; Hornberger & Link, 2012). English-only literacy programs with emerging bilingual learners instruct and assess students as if they were monolingual, often ignoring that bilingual learners utilize two languages to process information as they learn to decode and comprehend text. Empirical data reveal the essential role that oral language plays in the acquisition of literacy, and emerging bilingual learners may be asked to learn to read when they have not yet acquired oral English proficiency (August & Shanahan, 2006; Genesee, Lindholm-Leary, Saunders, & Christian, 2006). Furthermore, depending on students' level of oral

TABLE 1
Differences in Literacy Acquisition Between Monolingual and Spanish–English Emerging Bilingual Learners

Student profile	Monolingual English	Spanish–English bilingual learner		
Language status	English is the language of power and prestige Asymmetrical relation between English and Spanish			
Experiential knowledge inside/outside of school	English	Spanish and English		
Programming	Traditional English	English-only with push-in or pull-out for English as a second language	Transitional bilingual education	Paired literacy
Research to support reading instruction/assessment	Monolingual English	Monolingual English	Sequential theory of transfer	Holistic theory of bilingualism
Reading instruction	Monolingual English	Monolingual English	Transitional bilingual based on monolingual	Paired literacy, simultaneous instruction
Reading assessment	Monolingual English	Monolingual English	Monolingual Spanish/English	Holistic biliteracy assessment in Spanish and English in reading and writing

English proficiency, comprehension of text may be impeded because even if students are able to decode, they may not understand the words and texts they are asked to read, nor demonstrate their comprehension productively in English.

Some emerging bilingual learners have access to transitional bilingual education, which acknowledges that learning to read differs for emerging bilingual learners and acknowledges the value of learning to read in both of the students' languages. Transitional bilingual education programs provide students with short-term opportunities to learn to read in Spanish, with the theoretical assumption that skills and strategies learned in Spanish will transfer to English (C. Baker & Wright, 2017; de Jong, 2011). Transitional bilingual education often employs an implicit sequential theory that assumes all children come to school with a dominant language that serves as the initial introduction to literacy and that is then followed by transition to English. Whereas transitional bilingual education programs have been roundly criticized in the literature (C. Baker & Wright, 2017; de Jong, 2011; Gándara & Escamilla, 2016), there is evidence that these programs have been more beneficial to emerging bilingual learners than English-only programs (August & Shanahan, 2006; Genesee et al., 2006).

Authors of research syntheses have argued for the potential of paired literacy programs for developing biliteracy while also accelerating English literacy acquisition (Cheung & Slavin, 2012). Paired literacy is a holistic approach to teaching reading and writing in which students learn to read and write in two languages simultaneously beginning in kindergarten. Paired literacy practices are not duplicative and do not involve concurrent

translation across languages (Escamilla et al., 2014). Emerging empirical research establishing the potential of paired literacy biliteracy programs and concomitant assessment practices includes work by Soltero-González, Hopewell, and Escamilla (2012), Soltero-González, Sparrow, Butvilofsky, Escamilla, and Hopewell (2016), and Sparrow, Butvilofsky, Escamilla, Hopewell, and Tolento (2014).

Four findings of a review of literature on the DIBELS assessment and its impact on emerging bilingual Spanish–English-speaking learners in the United States further illustrate differences between monolingual and emerging bilingual learners' literacy development (Butvilofsky, Escamilla, Gumina, & Silva Diaz, 2019). The first finding relates to the heterogeneous nature of the population of emerging bilingual learners, but the majority of the studies did not disaggregate DIBELS results by students' English-language proficiency. It is likely that the failure to disaggregate by language proficiency masked differential impacts that the interventions and the DIBELS assessment itself had on emerging bilinguals, especially for those who are at the beginning stages of English-language acquisition. The second finding, based on the results of 15 studies, was that there were differential outcomes on DIBELS interventions between monolingual English and emerging bilingual learners. All students in these studies made gains based on DIBELS measures, but in no study did the emerging bilingual learners grow as quickly as the monolingual students. Further, most emerging bilingual students did not make sufficient gains to achieve DIBELS grade-level benchmarks. The third finding from this review ($n = 5$ studies) reported on the interaction of Spanish and English instruction. Results from these

studies highlighted the advantage of using two languages to teach literacy. For instance, Spanish receptive vocabulary was the greatest predictor of reading comprehension in English. Thus, the interaction of two languages is yet another way in which emerging bilingual learners differ from monolingual English learners. Finally, the review noted the lack of research examining the predictive validity of the DIBELS on reading comprehension of emerging bilingual learners beyond second grade. This is particularly important given the concern about reading comprehension and emerging bilingual learners.

Writing Assessments to Understand (Bi)Literacy Development

Clay (1975, 1991), Vernon and Ferreiro (1999), and Goodman (1990) reported how young students demonstrate their emerging knowledge of literacy in a variety of ways, including through writing. In fact, Clay and Vernon and Ferreiro argued that we cannot fully assess students' literacy development unless we include writing assessments along with reading assessments. This was important for our study because it illustrates the potential of using writing assessment to examine literacy development. Extensive research has demonstrated how reading and writing are connected (Fitzgerald & Shanahan, 2000; Harste & Short, 1988; Pearson, 1990; Sulzby, 1985). In her work with both English-speaking and Maori students, Clay (1991) described the ways in which students perceive their understanding of print (text) through their own writing. In Clay's (2002) reading assessment, Observation Survey of Early Literacy Achievement, she included two writing tasks: Hearing and Recording Sounds in Words (previously named Dictation Task) and Writing Vocabulary. These tasks were adapted to Spanish by Escamilla, Andrade, Basurto, Ruiz, and Clay (1996) in the *Instrumento de Observación*. The Hearing and Recording Sounds in Words/*Oír y Anotar los Sonidos en las Palabras—Prueba de Dictado* task serves as an authentic and meaningful way to understand students' knowledge of phonemic awareness and their grapheme knowledge. Both Clay's and Escamilla and colleagues' writing assessments assist in determining students' abilities to read and write.

Ritchey (2008) examined the development of students' letter writing and beginning spelling in the spring of kindergarten. Specifically, she examined 60 kindergartners' ability to write alphabet letters and to spell real and nonsense words in relation to beginning reading and phonological awareness skills. Results showed moderate to strong correlations between real-word spelling and early reading skills. These findings support research conducted by Ehri (1997, 1998), who found that students progress similarly, although not identically, in their ability to spell and their ability to read sight words.

A summary of research conducted by Shanahan (2006) further established the relation between English reading and writing. He identified four common knowledge bases that readers and writers draw on: the role that reading and writing have in assisting content knowledge, the development of metaknowledge, the correlations between the linguistic features of reading and writing, and the link between phonological and orthographic knowledge. Further, word recognition skills consistently predict spelling abilities, and spelling ability affects writing fluency. Spelling was also found to influence reading comprehension. The limitation of this work is that it reflects monolingual English learners. More recently, Olson, Scarcella, and Matuchniak (2015) argued that the Common Core State Standards provide a vision for what all students, including English learners, need to be literate in the 21st century, including developing reading skills necessary for interacting with complex texts, and critical writing skills to write about these texts. Although the majority of this article presents various writing methods, the authors highlight the need for formative writing assessment research, particularly for English learners.

Holistic Theory of Bilingualism

A holistic view of bilingualism suggests that a bilingual learner's languages are mutually reinforcing; that is, development in one language influences the development of the other language (Dworin, 2003). This perspective recognizes that the totality of a person's literacy skills and knowledge may be distributed across languages and cultures. Thus, the experiences and knowledge of bilingual learners can never be fully measured or understood if their abilities are not assessed bilingually. Research on biliteracy development has suggested that bilingual individuals draw on all of their linguistic and cultural resources as they learn to read and write in both languages (Butvilofsky, Hopewell, Escamilla, & Sparrow, 2017; Gort, 2006; Kenner, 2004).

Holistic bilingualism is a more dynamic framework to understand the biliteracy development of bilingual students than the more commonly used framework of monolingualism and/or parallel monolingualism (Hopewell & Escamilla, 2014). When monolingual frameworks are used, emerging bilingual learners' primary language may be seen as either irrelevant in the assessment and instructional practices or, worse, as obstacles to learning. Monolingual frameworks do not recognize the coexistence of languages within the individual and, consequently, may seriously underestimate what students know about language and literacy.

In early work in the area of biliterate writing development, Edelsky (1986) conducted extensive research on Spanish-speaking students' writing in English by analyzing 500 written texts from first, second, and third graders

attending a semirural migrant school. Edelsky concluded that literacy in Spanish supported the acquisition of literacy in English. When the students wrote in English, they used what they knew about literacy in Spanish, revealing that their strategies were not linguistic interference but rather an integrated reasoning across language systems.

With regard to writing assessment as a way of understanding literacy development writ large, Fu (2003) proposed the use of a bilingual process approach to develop Chinese students' writing abilities in English. She suggested that reasoning, imagination, and the ability to organize ideas are equally, or even more, important as language skills in learning to write. For this reason, she suggested that if we let students express themselves and present their ideas in their primary language, we give them opportunities to continue the development of their thinking.

Gort (2012) examined code-switching patterns in the writing-related talk of six emerging Spanish–English bilingual first-grade students over the course of six months. Four general categories of code-switching functions emerged: evaluation and self-regulation skills, sociolinguistic and sociocultural competence, metalinguistic insights, and use of code-switching to indicate a shift in topic, person, or syntactic form. Findings suggest that students have a capacity to exploit their developing bilingual linguistic repertoire for a variety of academic and social purposes. Of importance to our study, Gort showed how the two languages remain activated throughout the writing process to carry out writing-related tasks.

In a study with four high school students labeled as English learners with no access to bilingual instruction, Kibler (2010) examined the use of students' first language to broker second-language interactions in classroom writing. The students used their first language as a tool to facilitate communication with teachers and also demonstrated their rhetorical and linguistic potential in writing in a second language. Velasco and García (2014) analyzed five written texts produced by young bilingual writers, using translanguaging theory. Similar to a holistic theory of bilingualism, translanguaging does not view the languages of bilinguals as separate linguistic systems. The authors demonstrated that students use translanguaging in the planning, drafting, and production stages of writing, suggesting that students use their entire linguistic repertoire as they develop (bi)literacy.

Finally, Hopewell and Escamilla (2014) presented evidence to document how the use of a bilingual lens is critical in understanding literacy acquisition in emerging bilingual learners in third grade. Using the same data set from 268 emerging bilingual learners, the authors compared their English reading data with third-grade monolingual benchmarks and found that 86% (224) of the students were deemed to be significantly below grade level in their English reading. In a second analysis of the

same data set, monolingual Spanish criteria were applied, and 55% of the students were deemed to be significantly below grade level. Both analyses were from monolingual frameworks. The third analysis examined student results using a biliterate trajectory, and only 39% of the students were deemed to be significantly below benchmarks in reading. Thus, the use of a holistic biliterate lens reduced the number of students identified as being significantly below grade level by more than half.

Our study adds to the abovementioned literature through our examination of biliterate writing assessment as a potential means of better understanding students' overall knowledge of literacy, including their development of reading and writing skills. Biliterate writing assessment also affords us the opportunity to see the connection between reading and writing across languages and provides insights into the totality of bilingual students' literacy knowledge, supporting an asset-based perspective of bilingual learners.

Method

Data for the current study were drawn from a larger longitudinal paired literacy project, Literacy Squared, in Colorado, a U.S. Mountain state, examining emerging bilingual learners' biliteracy development (Escamilla et al., 2014). We used qualitative methods to understand the extent to which biliterate writing assessment provides deeper insight into students' biliteracy development than a commonly used reading assessment like DIBELS.

Context

The broader study was implemented at four elementary schools in the Iron City School District (all names are pseudonyms) starting in 2015. This school district has been in turn-around status since 2012. In the 2017–2018 school year, Iron City's student population identified as 83% Latino, 50% were identified as English learners (emerging bilingual learners), and 85% qualified for free or reduced-price lunch. Prior to 2009, bilingual and native-language programs were offered to emerging bilingual learners. From 2009 to 2014, the Iron City School District implemented an all-English alternative model of instruction using an English for Speakers of Other Languages model. In the 2015–2016 school year, the school district began the implementation of a nationally recognized paired literacy project, Literacy Squared, that was research-based and tested for Latino Spanish–English emerging bilingual learners. The goal of the paired literacy project is to develop biliteracy in Spanish–English elementary-age emerging bilingual students (Escamilla et al., 2014). The instructional component of the project includes simultaneous, although not duplicative, literacy

instruction in Spanish and English beginning in kindergarten and requires a balance of explicit instruction in reading, writing, oracy, and metalanguage. A variety of pedagogical strategies have been developed to ensure that literacy instruction is authentic to the language of instruction and that direct attention is given to making cross-language connections.

Measures

In the Iron City School District, the DIBELS and IDEL reading measures were used to assess participating students' reading progress and determine students' literacy abilities. A brief discussion of these assessments is provided next.

DIBELS

DIBELS (Good & Kaminski, 2002) was primarily created to assess the acquisition of early literacy from kindergarten through sixth grade. The tasks were designed to identify students experiencing difficulty in the acquisition of basic early literacy skills to provide support early and prevent further reading difficulties. The creators of DIBELS designed the assessment using the findings of a synthesis of research on reading development that resulted from the National Reading Panel's report (National Institute of Child Health and Human Development, 2000) and the National Research Council's (Snow, Burns, & Griffin, 1998) report. It is important to keep in mind that both reports were meant to be applied to monolingual English learners, not emerging bilingual learners. In fact, Kaminski and colleagues (2007) produced a position paper on DIBELS, in which they stated that it may not be appropriate for students who are learning to read in a language other than English.

DIBELS is made up of short, one-minute assessments to measure the big ideas in reading put forth by the National Reading Panel: phonemic awareness, phonics, reading fluency, vocabulary, and reading comprehension. For the purposes of this article, we only detail the subtests required for second-grade students. At the beginning of grade 2, students are given three DIBELS subtests:

1. Nonsense Word Fluency is purported to measure phonological recoding ability and alphabetic understanding. Students are given a score based on the number of phonemes they correctly identify from consonant-vowel and consonant-vowel-consonant pseudowords. Scores are given for identifying the individual letters (correct letter sounds) and reading the whole pseudoword (whole words read).
2. Oral Reading Fluency was designed to measure students' ability to read words correctly and accurately with connected text.

3. Retell Fluency is intended to measure comprehension. After students read a passage, they are asked to retell as much as they can about the text. Scores are given based on the number of details provided.

After the beginning of the year, second-grade students are only assessed on their oral reading fluency (words correct and accuracy) and their retell fluency. The individual scores from each subset inform an overall composite score that is then aligned to benchmark goals for predicting reading success.

IDEL

IDEL (D.L. Baker et al., 2006) is similar to DIBELS in that it is designed to assess basic early literacy of students learning to read in Spanish. The authors of IDEL claim that it is not a translation of DIBELS but that the assessment accounts for the linguistic structure of the Spanish language (Center on Teaching and Learning, n.d.-b). Other than what is posted on the DIBELS/IDEL website, there is little research to support the idea that IDEL aligns to the linguistic structure of Spanish. Like DIBELS, IDEL has many subtests to assess the five areas of reading. Although there are Spanish subtests in IDEL that are equivalent to all of the subtests in DIBELS, benchmark goals have not been established for the *Fluidez en el Relato Oral* (Retell Fluency) or the *Fluidez en el Uso de las Palabras* (Word Use Fluency). Benchmark goals have been created for *Fluidez en las Palabras sin Sentido* (Nonsense Word Fluency) and the *Fluidez en la Lectura Oral* (Oral Reading Fluency). Second-grade students are only assessed at the beginning of the year on nonsense-word fluency and oral reading fluency and subsequently only on oral reading fluency.

Using the DIBELS composite score and the two subtests from IDEL that have benchmark goals (*Fluidez en las Palabras sin Sentido* and *Fluidez en la Lectura Oral*), a range of scores determine whether a student is (a) at risk/red, (b) at some risk/yellow, or (c) at low risk/green. In Colorado, where this study was situated, DIBELS is an approved assessment used to identify all kindergarten through third-grade students who are experiencing difficulty in reading as required by the state's literacy act (Colorado Department of Education, 2017). Students who have scored at or below the cutoff score on a state-approved reading assessment are identified as having a "significant reading deficiency" (SRD) and placed on a READ (Reading to Ensure Academic Development Act) plan. For students determined to have a significant reading deficiency, the local education provider is required to (a) administer the state-approved diagnostic assessment within the first 60 school days, (b) monitor the ongoing progress of students throughout the year until they demonstrate grade-level proficiency and are removed from a READ plan, and (c) collect a body of evidence demonstrating that the

students are making sufficient progress to meet grade-level or state-approved standards (Colorado Department of Education, 2017). Students participating in biliteracy programming in the Iron City School District were assessed with both the DIBELS and the IDEL. Students who were placed on a READ plan from a biliteracy classroom showed a significant reading deficiency (according to the Colorado Department of Education cutoff scores) on DIBELS and IDEL.

Participants

In Iron City, the Literacy Squared project followed two cohorts of students: Cohort 1 began their biliteracy programming in kindergarten in the 2015–2016 academic year, and cohort 2 began their programming in first grade in the same year. For the current study, we selected writing samples from students in cohort 1 who were in second grade in 2017–2018. We purposely selected students who had non-English proficient and limited English proficient designations⁴ from their English-language proficiency assessment taken in spring 2017 and scored “Below” and “Well Below” on the DIBELS composite score at the beginning of the year in 2017; 35 students fit these criteria. Within this group, six students produced writing samples in both languages in the fall, winter, and spring that were indecipherable, meaning the students wrote a string of letters in response to the prompts in both languages or only drew a picture. As a result, we did not include these students’ writing samples in our analyses. Thus, we only analyzed 29 students’ samples. As noted in Table 2, seven students scored below benchmark on DIBELS, and 28 scored well-below benchmark or were identified as having a significant reading deficiency.

Because we subscribe to a holistic view of bilingualism, we include the students’ performance on IDEL, the Spanish adaptation of DIBELS, at the beginning of the year. Interestingly, eight of the 35 students performed at the green (at benchmark) level on the IDEL exam but were below or well-below benchmark on DIBELS, meaning that 25% of the students who had not read at proficiency in English were reading at benchmark in Spanish.

It is noteworthy that the mere introduction of assessment in two languages raises questions about the validity of the English-only DIBELS assessment.

All of the students included in this study identified as Latino/a. Although we do not have specific information about their backgrounds, we know that the majority of these students are from Mexican or Central American backgrounds.

Primary Data Sources and Collection: Literacy Squared Writing Prompts

Three pairs of Spanish and English writing samples were collected from all students in August, January, and May of the 2017–2018 school year. These prompts were created to align with the Common Core State Standards and elicited three writing genres: informational/explanatory, opinion, and narrative (see Table 3 for writing prompts). Although the prompts are similar across the two languages, they are not duplicative. The Spanish prompt was administered two weeks prior to the English prompt. Classroom teachers administered the prompts, and students were given 30 minutes to respond to each prompt.

Analysis

To understand how biliterate writing assessment provides deeper insight into students’ biliteracy development, we analyzed and coded each of the 29 students’ three pairs of biliterate writing samples by coding for three linguistic features of text found to be correlated with one another: discourse, sentence/phrase, and phonemic/orthographic (see Table 4; Clay, 1991; Escamilla et al., 2014; Shanahan, 2006). These linguistic features constitute the Literacy Squared Biliterate Writing Rubric (Escamilla et al., 2014), which ultimately informed our analyses. At the discourse level, we noted the overall organization of the text or coherence, which included whether the writing had a main idea, an introduction, details, and a conclusion. This level also included noting the ways that ideas were connected to one another, or cohesion, which involves the use of transitional words or phrases, as well as

TABLE 2
DIBELS and IDEL Scores for Second-Grade Students in Biliteracy Classrooms Who Were Designated as Non-English Proficient or Limited English Proficient

English-language designation	DIBELS benchmark	n	IDEL		
			Benchmark (green)	Strategic (yellow)	Intensive (red)
Non-English proficient (n = 15)	Below	2	1	1	
	Well below	13	1	2	10
Limited English proficient (n = 20)	Below	5	2	2	1
	Well below	15	4	2	9

Note. DIBELS = Dynamic Indicators of Basic Early Literacy Skills; IDEL = *Indicadores Dinámicos del Éxito en la Lectura*, the Spanish adaptation of DIBELS.

TABLE 3
Second-Grade Biliterate Writing Prompts, 2017–2018

Time	Genre	Spanish prompt	English prompt
August 2017	Informational/explanatory	<i>“Piensa en un día especial que has tenido. Explica porque fue tan especial.”</i> (Think about a special day that you have had. Write an essay telling why it was so special.)	“Think about a special person. Describe that person and explain why that person is special.”
January 2018	Opinion	<i>“¿Prefieres jugar adentro o afuera? Escríbenos porque te gusta más.”</i> (Do you prefer playing inside or outside? Write about why you like it.)	“Which pet would you prefer, a cat or a dog? Write about why you would prefer that pet.”
May 2018	Narrative	<i>“Piensa acerca de una ocasión cuando sentiste miedo. Escribe acerca de eso.”</i> (Think about a time when you felt scared about something. Write about it.)	“Think about a time when you felt you were treated unfairly. Write about it.”

TABLE 4
Code Book for Analyzing Writing Samples

Text feature	Descriptors
Discourse	Coherence: Overall structure of the text <ul style="list-style-type: none"> • Organization • Title • Main idea, introduction, and conclusion • Punctuation use (beginning and ending punctuation, one long sentence, note all other punctuation, cross-language transfer) • Sense of voice (Provide example(s).) Rhetorical structures (e.g., ends composition with a question)
Sentence/phrase	Structure of sentences <ul style="list-style-type: none"> • Simple, complex, or compound • Incomplete sentences Syntax: Word order <ul style="list-style-type: none"> • Noun–verb agreement and adjective–noun agreement (cross-language transfer) • Subject omission • Overgeneralizations
Spelling	1. Note all approximations/errors for students who have fairly conventional writing. Code as: <ul style="list-style-type: none"> • Language specific (“<i>ombre</i>” for <i>hombre</i> [man], “<i>Baca</i>” for <i>vaca</i> [cow], and “<i>becuse</i>” for <i>because</i>) • Cross-language influenced (“<i>nais</i>” for <i>nice</i>, “<i>pley</i>” for <i>play</i>, and “<i>awa</i>” for <i>agua</i> [water]) • Bidirectional transfer (“<i>baykc</i>” for <i>bike</i>) 2. For students who have many errors, classify as approaching standardization or not easily decipherable and list a few errors with the above codes.

punctuation. Knowledge of cohesion in writing has been found to be related to developing reading skills (Cox, Shanahan, & Sulzby, 1990). At the sentence/phrase level of analysis, we noted the structure of sentences, that is, simple, compound, and/or complex. We also noted the use of syntax, which included noun–verb agreement, adjective–noun agreement, and cross-language transfer. When analyzing the phonemic/orthographic features of the students’ writing, we noted the ways in which ideas and words were encoded. It is important to note that for this study, we included student samples that contained

many instances of “invented spelling,” that is, “children’s spontaneous or self-directed attempts to represent words in print” (Read, as cited in Ouellette & Sénéchal, 2017, p. 77).

Unique to the analysis of students’ invented spelling was the use of a holistic bilingual lens, in which we were able to apply understanding of phonetic principles from both Spanish and English. Because the students in this study were learning to become biliterate, they strategically used their knowledge of Spanish and English writing systems to encode words (see Table 5 for examples). In most

TABLE 5
Use of Spanish and English Phonetic Principles in Students' Writing

Direction of language transfer	Principle	Example(s)
Spanish → English	Vowels	"cucis" for <i>cookies</i> "bai" for <i>buy</i>
	Consonants	"javing" for <i>having</i> "dey" for <i>they</i>
	Vowels and consonants	"pinudbuder" for <i>peanut butter</i> "jayren cic" for <i>hide-and-seek</i>
English → Spanish	Vowels	"me" for <i>mi</i> (my) "cuwando" for <i>cuando</i> (when)
	Consonants	"parke" for <i>parque</i> (park)
Spanish ↔ English (bidirectional)	Vowels	"fude" for <i>food</i> "luke" for <i>look</i>

cases, students used Spanish phonetics to encode words in English, but there were instances in which English phonetics were used for Spanish spelling. There were some instances in which students drew on both systems to form

words, which involved bidirectional transfer between the languages (Butvilofsky, 2010; Dworin, 2003). This knowledge provided a relevant understanding that students were using all of their linguistic resources to communicate meaning.

The coding procedure by which we analyzed the writing samples consisted of the joint identification, by the four authors, in the creation of the coding scheme to be used. We began by each reading through two randomly selected students' writing samples to identify and code the linguistic constructs identified. Inter-rater reliability was established, and discrepancies were discussed until consensus was achieved. We divided the students' samples among ourselves to code independently. Codes were recorded in a data matrix (Miles & Huberman, 1994). In keeping with a holistic view of bilingualism, we examined each student's samples side by side to see how the linguistic features of texts compared across both languages. We used MAXQDA software to analyze frequencies for each linguistic text feature (see Table 6). Once we conducted this first level of analysis, we then summarized our observations of how each student's biliterate writing changed from fall, to winter, and finally to spring, thus providing insight into how the biliterate writing changed over time. To identify patterns among all students, the first author read through

TABLE 6
Percentages of Linguistic Features Represented in Writing Samples Across Time

Feature	Fall		Winter		Spring	
	Spanish	English	Spanish	English	Spanish	English
<i>Discourse</i>						
Main idea and introduction	82	79	93	93	89	88
Conclusion	25	11	24	24	64	50
Details	79	71	79	88	93	92
Beginning and ending punctuation	18	25	34	25	46	36
Other punctuation	14	11	17	14	30	18
Transitions	11	4	41	28	50	39
<i>Sentence/phrase</i>						
Simple	68	71	45	68	23	31
Simple and compound	29	21	52	31	58	46
Simple, compound, and complex	0	0	3	0	15	12
<i>Spelling</i>						
Hard to decipher	26	26	0	0	0	0
Many approximations	26	41	14	48	20	35
Approaching standardization	29	22	55	32	44	38
Mostly conventional	19	11	31	20	40	27

all codes and summaries to report trends in biliterate development.

Findings

In this study, we sought to demonstrate how biliterate writing assessment can provide insight into bilingual learners' acquisition of literacy skills/biliteracy development. The biliterate writing samples collected and their analyses focused on how students are making sense of print through their writing, from a holistic lens. We provide a discussion of our general findings based on the 176 writing samples analyzed using our analytic framework to describe how the students' writing evolved from fall to spring. We then provide one student's six writing samples produced in his second-grade year, to detail his biliterate writing across the span of one school year.

General Findings

For all samples collected in both languages across time, the 29 students in this study were able to respond to the prompts given. There was some variety in the amount of text written from fall to spring in each language, but overwhelmingly, the majority of students responded to the prompt with a main idea and included additional details. They also demonstrated an understanding of the various genres given in both languages, which demonstrates a correspondence to reading comprehension. Table 6 presents general findings presented through percentages for the linguistic components examined.

Although almost all of the students in this study had been identified in the fall by DIBELS as needing intensive intervention in their reading development, we observed many strengths in their biliteracy abilities. To begin, the majority of students, 82% in Spanish and 79% in English, included at least a main idea in which they responded to the informational prompt, which indicates quite generally that they understood the communicative aspect of writing. They also included supporting details related to the main idea in each language. To further what students understood about writing and text, most of them included some form of punctuation, indicating their knowledge of how such marks guide the reader through the text. Although only some students (18% in Spanish and 25% in English) did not include standard use of beginning and ending punctuation, they were exploring the use of it. Some included only a period at the end of a list of many ideas that were held together with the word *y* (and) in Spanish or *and* in English. Others included several periods or commas, but their inclusion was not consistent or conventional. In general, students' compositions were made up of simple sentences that included a subject, verb, and object.

In the winter, all of the students responded to the prompts by providing a related opinion. The most notable differences in discourse features between the fall and winter writing samples were the increase in the amount of details and punctuation included, as well as the inclusion of an organizational framework. In the Spanish sample, students identified whether they preferred playing inside or outside, along with many supporting ideas for this preference. Similar to the Spanish prompt, in English, students selected either a dog or a cat as their preferred pet and provided descriptive language to support their choice. One student wrote, "ther so cute and soft and cutoly" (they're so cute soft and cuddly). Some students incorporated an organizational structure appropriate to the genre by including language such as "one reason," "another reason," or "a last reason" or using sequencing language: "*primero...Segundo...finalmente*" (first...second...finally). Additionally, 24% of students included a conclusion to their Spanish or English writing in which they engaged the reader; for example, in Spanish, one student wrote, "*Espero que te gusto me escritura*" (I hope you liked my writing). In English, some students concluded with a rhetorical question addressed to the reader, such as "Wats your favrit pet" (What's your favorite pet?). It is worth noting that a few students demonstrated their understanding of the discursive element of argumentation by using contrasting language in their writing. For example, one student wrote, "I prfer [prefer] a dog for my pet becas they prtect [protect] you and the cats are lasy. Dogs run faster than cats." The inclusion of these transition words affected students' sentence constructions, in that they had progressed from relying only on simple sentences to including more compound, and some complex, sentence structures. Overall, the percentage of transition use increased 30% from fall to winter in Spanish and 24% in English. Students' attempts to incorporate transitions and write more complex sentence constructions meaningfully in their samples over time provide evidence that they can grapple with more complex ideas, which can transfer to their reading.

By the spring, we observed the greatest change in most of the students' biliterate writing, in that they responded to the prompt with a definite organizational structure appropriate to the genre of narration and included more conventional punctuation usage. Most students included a complete story in their narrative writing, with an introduction, supporting details to narrate the account, and a conclusion. For some students, this involved the inclusion of a problem or a solution. Further, many students included language to indicate the sequencing of events with the attempt to include appropriate punctuation, such as the use of commas. This was done by using an adverbial phrase to introduce the time or place of their narrative such as, "*Abia un día cuando yo fui a ileches⁵ con mi mamá, mi papá, mi hermano...*" (There

was a day when I went to Elitches with my mom, my dad, my brother...). Additionally, some students went beyond using traditional transitions to sequence events (e.g., *first*, *second*, *last*) to more varied constructions, such as Betty, who wrote of a time when she was treated unfairly: “One day, the music ticher toke my snak because she said I can’t ate it. Den she aet them. For the next day my dad...” (One day, the music teacher took my snack because she said I can’t eat it. Then she ate them. For the next day my dad...). Betty was able to guide the reader through the sequence of events with specific language related to the passage of time. We also observed the inclusion of more sophisticated writing techniques, such as the inclusion of onomatopoeia and dialogue in the narrative samples. Alicia wrote, “*pum tanc, ring ring*” to describe the noises that prevented her from sleeping. Although several students included dialogue in their samples, they did not always use standard punctuation to denote it. For example, Emilia wrote, “*Yo dije mama tengo miedo mi mamá dijo no ay nada.*” (I said mom I’m scared my mom said there’s nothing.) Students’ ability to narrate a story in writing with a variety of cohesive devices, onomatopoeia, and dialogue demonstrates their understanding that narratives serve to entertain the reader, as well as an overall understanding of the structure of narratives. This evidence of understanding narratives can serve in demonstrating students’ growing capacity to comprehend connected texts in reading.

When examining how students encoded words across time, we saw general growth toward an increase in conventional spelling. In the fall samples, the majority of students used the totality of their phonetic knowledge in both languages to spell words in both Spanish and English. The general trend was that the spelling approximations in Spanish would be considered developmental and language specific, meaning they included the use of orthographic knowledge of Spanish to encode words. In other words, many of the spelling errors made were based on matched consonants, or the substitution of letters that make the same sound. These approximations are common throughout the Spanish-speaking world for writers of all ages but particularly for children or individuals without significant postsecondary education. For example, *B* and *V* in Spanish make the same sound, so students wrote “*estava*” for *estaba* (was); the /s/ sound can be represented by the letters *C*, *S*, and *Z*, so we observed “*felis*” for *feliz* (happy) and “*calsetines*” for *calcetines* (socks). Students also omitted accents in their Spanish writing, such as “*jugue*” for *jugué* (played) and “*papa*” for *papá* (dad).

Students’ English spelling of words in the fall were made up with more invented phonetic spellings of words. In some instances, students used Spanish phonetics to spell words; for example, the /i/ in Spanish makes the long /e/ sound, so we observed “*bicas*” for

because and “*slip*” for *sleep*. In other instances, it appeared that students spelled words without relying wholly on orthographic or morphological knowledge (Ouellette & Sénéchal, 2017), such as “*frele*” for *friendly* and “*helpo*” for *helpful*. A few students in the fall were in the early stages of encoding that drew on the totality of their phonetic knowledge in both languages, but they did not always have a complete sense of “wordness,” meaning they did not represent each sound in their construction of words or did not clearly delineate words through the use of spacing. For example, Anahí wrote, “*era el major diy demviba astateniy shapkns enmi bas-tel*” (*era el major día de mi vida hasta tenía Shopkins en mi pastel*; it was the best day of my life it even had Shopkins on my cake). Karin wrote in English, “*May specol frenis my fren JaDe. She is can rispefol.*” (My special friend is my friend Jade. She is kind respectful.) These constructions, although absent some phonetic representation, are meaningful and demonstrate the emerging biliteracy knowledge the students had. It is important to note that when the totality of the students’ spelling knowledge in both languages was taken into consideration, it became apparent that some phonetic knowledge was stronger in one language than the other and that students were drawing from an integrated understanding of their full linguistic repertoire. It is also the case that monolingual assessments and monolingual raters may not be fully capable of understanding the developmental biliterate behaviors described earlier because they do not know how two languages interact in the development of biliteracy, and this development demonstrates understanding rather than deficiency. In the winter, most students had progressed in the ways that they were spelling words.

The main shift observed in Spanish from the fall was students’ ability to use more conventional orthographic principles in constructing words. The majority of approximations were based on the omission of accents and approximations made with matched consonants. Such approximations are common throughout the Spanish-speaking world for writers of all ages but particularly for children. In English, students were representing almost all sounds in words phonetically, and many were writing high-frequency words conventionally. The students who were having difficulty with the concept of word in the fall demonstrated greater control of this concept of print in the winter. By spring, most students produced much more text, and as a result, they had more spelling approximations than in the winter. However, their approximations demonstrated greater understanding of the orthographic principles of each language in their writing.

Across time, the students in this study demonstrated greater understanding of various aspects of writing that are directly related to reading. As Ahmed, Wagner, and Lopez (2014) stated,

research on linguistics, psychology, and educational sciences suggest there are common constructs underlying literacy development....these include knowledge of phonological structures, knowledge of alphabetic principle, fluency in decoding and encoding, comprehension of oral and written language and wide reading and writing. (p. 420)

The emerging bilingual learners in this study demonstrated these abilities and their capacity to demonstrate growth across their second-grade year, which DIBELS did not capture.

The Writing Progression of One Student

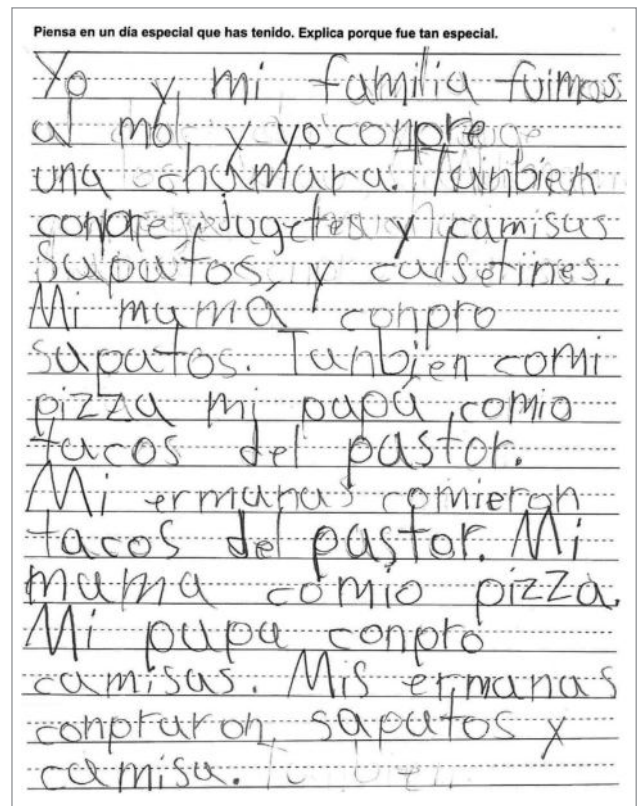
To further illustrate the potential that formative biliterate writing assessment has in making visible what students know about biliteracy, we present the six writing samples that one student, Joel, produced during his second-grade year. We selected this student because his writing is illustrative of the abilities that students in this study demonstrated in both languages across time. Our in-depth analyses of Joel's biliterate writing demonstrates the asset-based framework to make visible the student's strengths as he becomes biliterate.

Based on Joel's 2017 overall ACCESS test result of "Developing," he was labeled as a limited English proficient student. Like the other students in this study, Joel took both DIBELS and IDEL a minimum of three times during the 2017–2018 school year. It is of interest to note that his score of "Well Below" on DIBELS remained the same across the school year, whereas his IDEL scores placed him in the green zone (meeting benchmarks) from the beginning to the end of the year. Although his IDEL scores were higher, on the surface, it seems as if he had not made progress in literacy in either Spanish or English. Examination of his biliterate writing assessments collected during the same three time periods present a different story.

Spanish Discourse

In the fall, Joel's Spanish writing sample (see Figure 1) demonstrated that he wrote to a main idea (going to the mall) and provided many details, listing what he and his family did and bought at the mall. Similar to the other students in this study, his writing was made up of simple sentences, and he used the transition word *también* (also) two times. His writing also demonstrated that he could use capitals and periods, appropriate punctuation for beginning and ending sentences. In Joel's Spanish winter sample (see Figure 2), his knowledge of writing had grown in that in addition to a main idea, he also included compound sentences for supporting details, and a conclusion to his writing. In his spring Spanish sample (see Figure 3), Joel added a title to his story. In addition to the

FIGURE 1
Joel's Fall Spanish Writing Sample



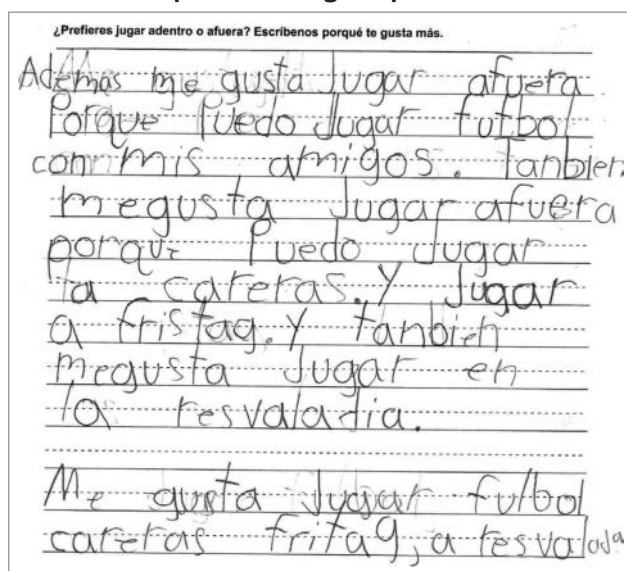
Note. English translation: I and my family went to the mall and I bought a jacket. Also I bought toys and shirts shoes, and socks. My mom bought shoes. Also I ate pizza my dad ate tacos al pastor. My sisters ate tacos al pastor. My mom ate pizza. My dad bought shirts. My sisters bought shoes and shirt.

inclusion of an introduction and conclusion, which correspond closely to the problem-and-solution structure of a narrative, he elaborates on how scared he was by providing specific details: "Me escondi...me cede [quedé] callado, y me fui abajo de la cama y me cede ai [allí] 5 minutos!" (I hid...I kept quiet, and I went under the bed and stayed there 5 minutes!) Joel's inclusion of commas, question marks, and exclamation marks, although not conventional, illustrate his deepened understanding of literacy.

Spanish Syntax

With regard to syntax or language usage at the sentence/phrase level, in the fall, Joel wrote, "Mi ermanas" instead of "mis hermanas" (my sisters). He also omitted some articles in both the fall and winter. An overall analysis of this aspect of our framework indicates that he had a fairly sophisticated understanding of Spanish syntax and generally used standard grammar and phraseology in his writing.

FIGURE 2
Joel's Winter Spanish Writing Sample



Note. English translation: In addition I like to play outside because I can play soccer with my friends. Also I like to play outside because I can play races. And play freeze tag. And also I like to play on the slide. I like to play soccer races freeze tag, and slide.

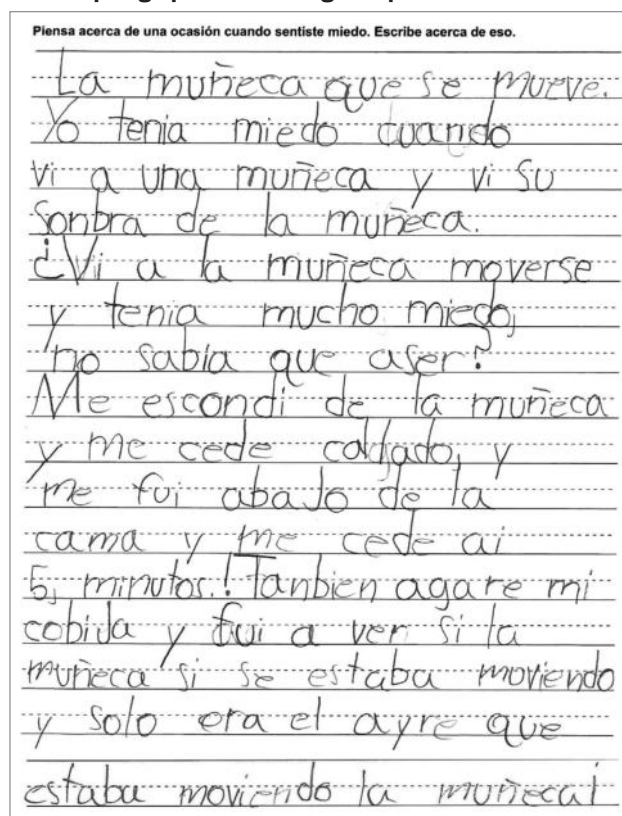
Spanish Spelling

In Joel's fall Spanish sample (see Figure 1), the majority of high-frequency words were spelled correctly, and he was approximating standardization in errors, in that the approximations such as "sapato" for *zapatos* (shoes) and "jugetes" for *juguetes* (toys) are near standard spellings of these words and are common approximations for young Spanish writers. A reader can easily read these approximations, and it is evident that the student has alphabetic knowledge, which is one of the expectations of DIBELS. However, the student cannot only hear sounds in words; he can also record them on paper, which is a more sophisticated knowledge of reading/writing than the DIBELS or IDEL require. Joel's spelling shows that he did not yet know accent rules with regard to past tense verbs in Spanish. However, if he were to read his writing, he would likely read the words as if the accents were there, indicating that he is writing about past events.

Joel's winter writing sample (see Figure 2) reveals that most words are spelled conventionally, and the few spelling approximations could be considered to be common and developmental to Spanish: "resvaladia" for *resbaladero* (slide) and "careras" for *carreras* (races). He continued to omit accent marks on words such as "futbol" for *fútbol* (soccer) and "tambien" for *también* (also), but these do not affect the reader's ability to read his work and, if anything, present an implication for teaching.

Joel's spring sample (see Figure 3) indicates once again that most words are spelled conventionally, and his approximations indicate that he was using and applying

FIGURE 3
Joel's Spring Spanish Writing Sample



Note. English translation: The doll that moves. I was scared when I saw a doll and I saw the doll's shadow. I saw a doll move and I was very scared, I didn't know what to do? I hid from the doll and I kept quiet, and I went under the bed and I stayed there 5 minutes! I also grabbed my blanket and I went to see if the doll was moving and it was only the wind that was moving the doll!

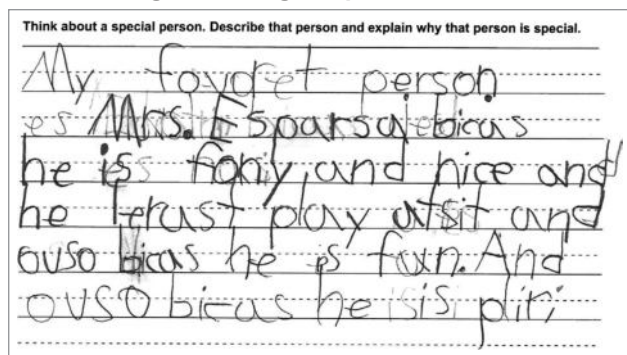
Spanish phonetic and orthographic principles. Further, he could hear sounds in words and applied them in writing. Examples of approximations include "aser" for *hacer* (to make/do), "cede" for *quede* (stay), "ai" for *alli* (there), and "ayre" for *aire* (air). In this sample, he continues to omit accent marks for past tense verbs in the imperfect and preterite tenses (e.g., "tenia" for *tenía* [had], "sabia" for *sabía* [knew]).

In sum, it is clear that Joel made significant growth in his ability to write in Spanish, and given the relation between writing and reading (Shanahan, 2006), it is safe to conclude that he made significant growth in Spanish reading also, growth that the IDEL assessment was only able to capture through the *Fluidez en la Lectura Oral* (Oral Reading Fluency), not in the ability to comprehend and write organized compositions.

English Discourse

In the fall, Joel wrote to the prompt, including a main idea and several simple descriptors joined with *also* and *and* (see Figure 4). Compared with his Spanish sample (see

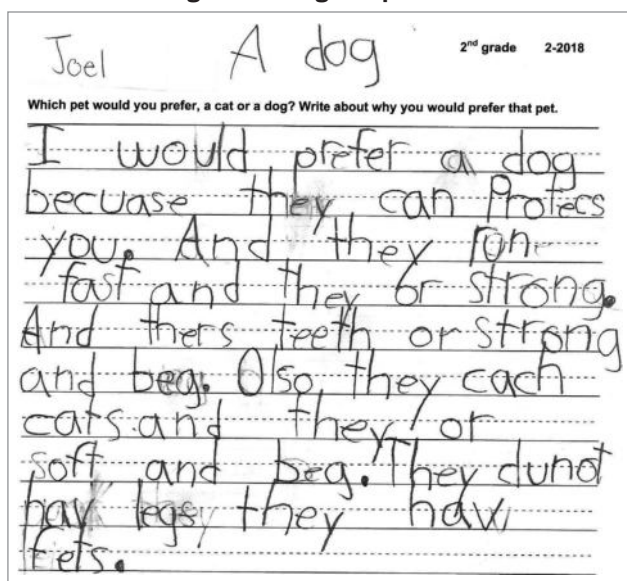
FIGURE 4
Joel's Fall English Writing Sample



Note. Text with spellings corrected: My favorite person is Mrs. Esparza because he is funny and nice and he lets us play outside and also because he is fun. And also because he is pretty.

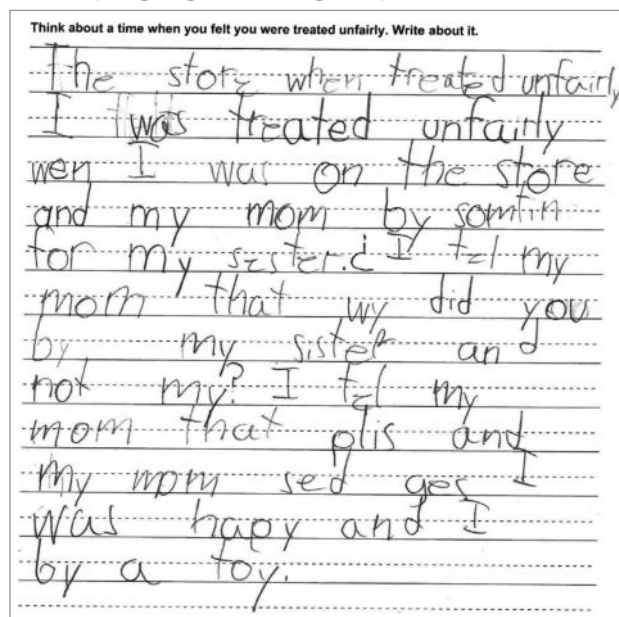
Figure 1), he wrote less and did not utilize beginning and ending punctuation as conventionally. By the winter English sample (see Figure 5), he had grown to include at least seven supporting details to support the main idea, as well as transition words (*also* and *because*) to connect his ideas. In the spring English sample (see Figure 6), Joel included all components of the fall and winter and also included a title, introduction, conclusion, and dialogue, although punctuation to signal them was not included. These elements demonstrate Joel's understanding of how narratives work. In the spring, he was using capitals and periods again in a correct way and included an inverted

FIGURE 5
Joel's Winter English Writing Sample



Note. Text with spellings corrected: "A dog" I would prefer a dog because they can protect you. And they run fast and they are strong. And their teeth are strong and big. Also they catch cats and they are soft and big. They do not have legs they have feet.

FIGURE 6
Joel's Spring English Writing Sample



Note. Text with spellings corrected: "The store when treated unfairly" I was treated unfairly when I was on the store and my mom buy something for my sister. I tell my mom that why did you buy my sister and not me? I tell my mom that please and my mom said yes I was happy and I buy a toy.

(Spanish) question mark, indicating that he was approximating more sophisticated punctuation.

English Syntax

With regard to syntax, in his fall English sample (see Figure 4), Joel's writing included hyposegmentation (the joining together of two words) in the form of "lerust" for *lets us* and lacked pronoun agreement in "Mrs. Esparza bicas he is," when in fact the teacher was Mr. Esparza. Although undoubtedly, these approximations in syntax need to be topics of instruction, we might argue that these are in fact not reading issues but rather language issues that could be easily addressed with a rigorous English-language development program and likely will not be addressed by the issues identified by DIBELS. In his winter English sample (see Figure 5), Joel's only syntax error was the use of "fets" for *feet*, an overgeneralization for the plural of *foot*. Once again, this is most likely not an issue related to poor reading skills. In Joel's spring English sample (see Figure 6), the syntax errors include the use of "on" for *in* and the issue of omitting words in English syntax. For example, he wrote, "Wy did you by my sister and not my?" when he should have written, "Why did you buy for my sister and not for me?" Again, this syntax error does not indicate a lack of either a reading or a writing skill, but rather a cross-language approximation

that should be addressed via English-language development instructional time, not remedial reading.

English Spelling

In the fall, Joel did not use conventional spelling for most words but demonstrated an emerging knowledge of spelling patterns (see Figure 4). This is important in that he was able to approximate standard spelling, indicating knowledge of phonology and how phonemes are combined to make words. His spelling approximations further indicate approximations that are common for monolingual English-speaking students and emerging bilingual learners. These types of words include “Englihs” for *English* and “fany” for *funny*. Approximations also include words that are influenced by Spanish, such as “bicas” for *because*, “atsit” for *outside*, “ouso” for *also*, and “piri” for *pretty*. In the winter, most words are spelled conventionally. Approximations included those that are common to monolingual English students (e.g., “protecs” for *protect*, “or” for *are*, “cach” for *catch*, “hav” for *have*) and those that are influenced by Spanish (e.g., “beg” for *big*, “olso” for *also*). Finally, in the spring, most words were spelled conventionally, and approximations were encoded using English orthographic rules and not influenced by Spanish phonetics.

Discussion

Through this study, we endeavored to examine the role that the alignment between an assessment such as DIBELS and a formative writing task, specifically the Literacy Squared Biliterate Writing Assessment, might play in demonstrating emerging bilingual students’ literacy abilities in two languages. We have argued consistently that assessments need to be strengths-based and capitalize on what students know. The DIBELS assessment, by its definition and use, identifies what students do not know, and this deficit orientation combined with a very narrow range of discrete skill assessments, along with a lack of in-depth knowledge of profiles of emerging bilingual learners, likely undervalues and underassesses what emerging bilingual learners know and can do in reading and writing.

Through our examination of students’ biliterate writing, we were able to uncover the vast amount of knowledge they had related to literacy, skills that were not apparent through either DIBELS or IDEL. In fact, some of the skills most often “remediated,” such as phonemic awareness, or ability to decode words and connect words and ideas in meaningful ways, were readily apparent in students’ Spanish and English writing samples. In fact, these students’ writing samples illustrate well the theory of holistic bilingualism in that what students knew in one language (e.g., the alphabetic principle, organization of text, the fact that punctuation marks

are needed for meaning making) were frequently applied across languages in one direction or in bidirectional ways.

Our findings from students’ biliterate writing indicated that there was no need for the most common forms of remediation given. This means that many of the students in this study would have been placed in higher level reading groups, which would have given them more opportunities to learn, access to more complex and interesting texts, and greater opportunities to engage in comprehension activities. DIBELS-dictated outcomes and subsequent interventions relegated students to rote learning of the smallest and most esoteric aspects of text and denied them important opportunities to develop oracy, metalanguage, and writing. Moreover, time given to incessant testing and questionable interventions was time taken away from higher level academic pursuits. It goes without saying that there is also a fairly large price tag for these assessments and interventions not only in district and school expenditures and time but also in the loss of human capital when students are not taught to their potential and when results of assessments give false negatives in terms of growth and progress.

It is also critically important to note that our study findings indicated very little growth in either English or Spanish on DIBELS and IDEL. In fact, in some cases, students’ scores actually declined. This is important because in our state, as in many others, students who are well-below or below benchmarks must be placed on a READ plan (Colorado Department of Education, 2017). The READ plan triggers intense intervention, with negative communication to parents stating that their child is not making progress in reading, and teacher evaluations can also be negatively affected. In the case of Joel, the particular diagnoses of his reading growth and acquisition were unwarranted and likely incorrect. This holds true for the majority of students in this study.

Findings from this study question the use and efficacy of large-scale assessments and early literacy programs that were created for monolingual English-speaking students and have been applied without critical examination to students who are simultaneously acquiring two languages and literacy systems. Other scholars, such as Hoffman (2012), have raised similar concerns about the efficacy of these same literacy practices and assessments in other contexts, such as Africa. Like us, Hoffman argued that precious resources are being lost that could be invested in more productive ways. Further, it is not just that said early literacy programs are ineffective; they are even counterproductive and often undermine local expertise.

Finally, it is clear that teachers and schools need to clearly understand the difference between being an emerging bilingual learner and a struggling reader (Hopewell & Escamilla, 2014). In this study, because of

the ubiquitous use of DIBELS beginning in kindergarten, it is quite possible that many students identified as having significant reading deficiencies were, in all likelihood, emerging bilingual learners who were learning to read and write in two languages simultaneously. Too often, emerging bilingual learners are confused with students who are struggling readers.

A formative writing assessment such as the Literacy Squared Biliterate Writing Assessment has several advantages. It can capture emerging bilingual literacy behaviors and can contrast them to monolingual assumptions about struggling readers. It can be group administered for little or no cost. It provides a means to assessment that is broader in scope and is appropriate for assessing what students can do across and within languages. It can assess all of the skills that DIBELS or IDEL can assess and more. The Literacy Squared Biliterate Writing Assessment illustrates that students have abilities in organizing their writing and in using rule-governed behavior, such as phonological and phonemic awareness, and adds the element of grapheme awareness to a teacher's ability to observe the early acquisition of literacy. The assessment provides access to observe how students' knowledge of literacy and biliteracy expands across time, and the teacher's observations can be incorporated into regular Tier 1 instruction with much less need for interventions. Finally, it enables observation of literacy skills and knowledge that may appear in one language and not the other, hence enabling educators to enact a holistic view of emerging biliteracy.

Future Research

Suggestions for future research based on findings from this study include research examinations of how writing assessment might be used to assess reading comprehension and writing in emerging bilingual learners and others. It is clear that comprehension continues to be an issue that assessments such as DIBELS are inadequate in either predicting or assessing. Of course, where possible and feasible, further research might include comparative studies assessing outcomes in studies in which teachers and schools with significant numbers of emerging bilingual learners use DIBELS and related interventions versus those that do not. Without a doubt, more theoretical and empirical research is needed to examine how two languages interact when emerging bilingual learners are learning to read and write in both bilingual and monolingual classroom situations. Finally, more nuanced research is needed to examine the population of emerging bilingual learners without considering them as a homogeneous population.

NOTES

¹We use the term *emerging bilingual learners* to identify students who speak a language other than English at home. This term is used to

capture the bilingual potential of each student and the bilingual practices in schools that will hopefully enable these students to develop full repertoires of bilingualism and biliteracy. The term acknowledges the dynamic linguistic abilities of students learning more than one language (García & Kleifgen, 2018). We accept that the term is ambiguous, but we use it for its positive connotation in this article to refer to the Spanish–English simultaneous bilingual students involved in this particular study.

²We acknowledge that differing views exist related to the literacy acquisition for emerging bilingual learners, including that instruction for such learners should be the same as for native English speakers.

³WIDA's ACCESS is an English-language proficiency test used widely in the United States and has a reading subtest, which is deemed appropriate for emerging bilingual learners. However, this subtest is rarely considered when evaluating emerging bilingual learners' reading skills.

⁴In this school district, students are still labeled by the federal guidelines that use non-English proficient, limited English proficient, and fluent English proficient to identify students' English-language proficiency designations. *Limited English proficient* indicates an intermediate level of English-language proficiency. In contrast, the ACCESS test uses less deficit terms, "Developing" and "Expanding," to indicate the same level of proficiency.

⁵Elitch Gardens is an amusement park in the metropolitan area of Denver, Colorado.

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