Invited Article

The Biliteracy Translation Measure: Using Written Translations to Index Bilingualism and Biliteracy in Spanish and English

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The goal of this study was to examine written translation as a means to: a) build on the theoretical notion that a bilingual individual's languages are shared; b) operationalize biliterate ability; and c) propose a new method of assessment for culturally and linguistically diverse students. Drawing from the fields of cognitive psychology and literacy, a conceptual framework was developed for the use of written translation to examine biliteracy. Next, the Biliteracy Translation Measure (BTM), a Spanish-English written translation task, was designed and tested. Results suggest a positive relationship between parallel measures of English and Spanish language and literacy and the BTM, providing support for the BTM's utility in assessing biliteracy.
Keywords: assessment, bilingualism, biliteracy, Latino, Spanish, translation

The Biliteracy Translation Measure

Using written translations to index bilingualism and biliteracy in Spanish and English bilingualism is a construct that is neither easily defined nor measured. To understand the nature of bilingualism, we must first recognize that a bilingual individual is not the sum of two monolinguals (Grosjean, 2010), and then consider the notion that a bilingual's two languages might share a conceptual knowledge store (Francis, 2005). For some researchers, these notions of bilingualism intersect with an abiding interest in literacy (Bauer & Gort, 2012; Hornberger, 1989, 2004). For some educators and school psychologists, bilingualism intersects with the use of assessments in making decisions regarding special education referrals. For researchers and educators alike, however, attempting to assess the dual language and literacy abilities of bilingual children is a complex endeavor. Applied psycholinguistic work in the United States with Spanish-English bilingual children has attempted to unpack this complexity by using parallel measures of Spanish and English to document cross-linguistic relationships. Similarly, in an effort to make appropriate referrals, best practices among practitioners also include the use of assessments in both the child's native language and English. While this dual-language approach to research and assessment moves beyond a deficit model of bilingualism, the use of language batteries that were developed with, and normed on, monolingual speakers of those languages does not allow for a complete understanding of a bilingual's cognitive processes.

The Assessment of Culturally and Linguistically Diverse Students

To our knowledge, there is no single measure that evaluates bilingualism or biliteracy. Language and literacy researchers who focus on Latino/as in the United States have approached this challenge through the use of parallel measures in both Spanish and English (e.g., Leider, Proctor, Silverman, & Harring, 2013; Proctor & Silverman, 2011). Likewise, when working with culturally and linguistically diverse (CLD) populations, special education referral decisions are often informed by performance on similar standardized measures. The assessment of CLD students through the use of these standardized measures, which were developed with, and normed on, children of different cultural and linguistic backgrounds, is problematic. Theoretical perspectives of bilingualism and biliteracy suggest that a bilingual's two languages are related (Bialystok, 1988; Cummins, 1991; Francis, 2005; Grosjean, 2010), yet empirical research has shown null to small effects of Spanish language and literacy skills predicting English reading performance (Lesaux, Crosson, Kieffer, & Pierce, 2010; Mancilla-Martinez & Lesaux, 2010; Nakamoto, Lindsey, & Manis, 2008; Proctor, August, Snow, & Barr, 2010), suggesting limited evidence for robust cross-linguistic relationships. The inability to document a clear relationship across languages is in part related to the nature of the assessments at hand: that is, monolingual assessments were developed to index language or literacy ability in a single language. Thus, the linguistic profile of a child who speaks two (or more) languages cannot be adequately captured by monolingual language batteries.

In education practice, inaccuracy in measurement can often result in disproportionate representation of this population in special education (e.g., Artiles & Ortiz, 2002; Artiles, Rueda, Salazar, & Higareda, 2005; Artiles, Trent, & Palmer, 2004; Macswan & Rolstad, 2006; McCardle, Mele-McCarthy, Cutting, Leos, & D'Emilio, 2005). This is particularly the case with CLD students, who, arguably, possess unique language and literacy strengths that are not captured in single-language assessments. Language and literacy assessment, particularly with CLD students, could benefit from a single measure that operationalizes bilingual and biliterate ability (Proctor & Silverman, 2011).

A Cognitive Perspective on Bilingualism and Biliteracy

In the absence of child-level indicators of biliteracy, cognitive and psycholinguistic researchers have attempted to capture this dual-language relationship through means of understanding the lexical and conceptual links between the first (L1) and second language (L2). Specifically, the Revised Hierarchical Model (RHM) (Kroll & Sholl, 1992; Kroll & Stewart, 1994) comprises three interrelated constructs: L1 lexical representations, L2 lexical representations, and conceptual overlap. Proponents of the RHM suggest that both lexical and conceptual links are active in bilingual memory, but that the strengths of the links differ as a function of proficiency across languages. It is presumed that the relationship between conceptual representations and L1 lexical representations is stronger than the relationship between those same conceptual representations in an L2 (assuming, of course, that the individual is L1 dominant). For example, an English-Spanish bilingual may have a conceptual representation of "ice," in which the L1 English speaker could easily give many lexical representations for *ice* (e.g., *ice cube, crushed ice*, *black ice*). In contrast, the speaker's weaker language (L2, Spanish) alters the relationship

between a conceptual understanding of *ice* and lexical representations, likely resulting in fewer representations for *ice* (e.g., *hielo*).

The RHM has been explored in cognitive psychology primarily through the examination of bilinguals' word and picture translation ability (see Bowers & Kennison, 2011; Ferré, Sánchez-Casas, & Guasch, 2006; Prior, MacWhinney, & Kroll, 2007). While these studies illustrate that languages of a bilingual individual are surely interrelated, attending more deeply to issues of language and literacy beyond the single word level is warranted. Translation at the sentence level may serve to move our understanding forward on whether and how languages are interrelated. For instance, the English sentence, *The children went to see a funny movie and laughed a lot*, might be translated as *Los niños se fueron a ver una película chistosa y se rieron mucho.* Alternately, *El mejor equipo de fútbol ganó el largo partido* is reasonably translated as *The best soccer team won the long game*. In both cases, one must be able to read and comprehend in one language, establish a conceptual representation, and render that representation in another language, a process clearly aligned with the RHM framework.

Simple Views of Reading and Writing

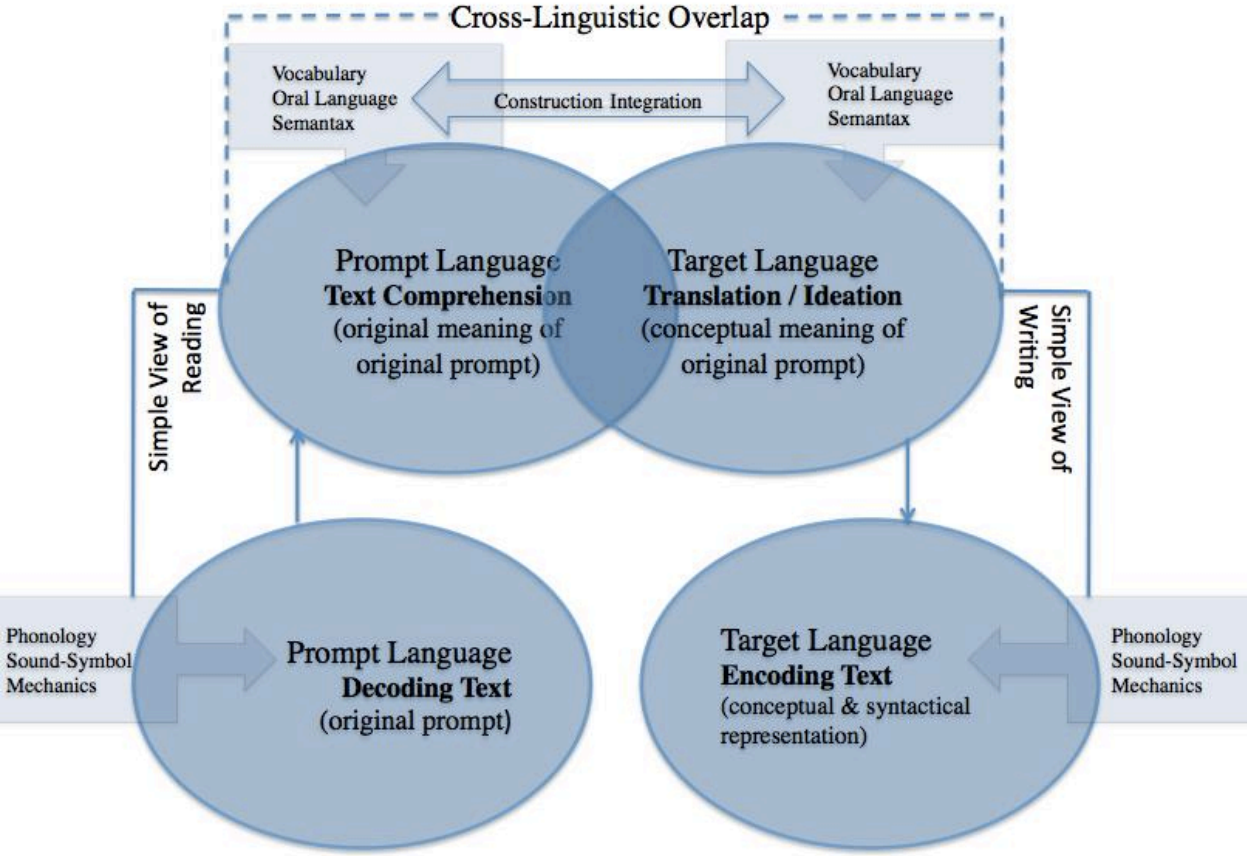
In the present view, being biliterate suggests that one is able to read and write in two languages. The Simple View of Reading (SVR) (Hoover & Gough, 1990) posits that the reading process comprises two basic steps: decoding and linguistic comprehension. The first requires that a student read words and convert them to linguistic form. Once that has been accomplished, the student must then, as the second step, understand what he or she has read. This requires linguistic comprehension—a more complex domain and one characterized by a range of language components, including broad vocabulary (Anderson & Freebody, 1983; Cunningham & Stanovich, 1997), morphological awareness (Kieffer & Lesaux, 2008; Nagy, Berninger, & Abbott, 2006), and semantic-syntactic understanding, or semantax (Menyuk & Brisk, 2005). When decoding skills and linguistic comprehension are adequately developed, comprehension of text proceeds accordingly.

The Simple View of Writing (SVW) (Juel, Griffith, & Gough, 1986) is related to the SVR. In the SVW, an ability to encode, or take language and render it in written form, is an essential but insufficient initial skill. The second component is ideation, in which language is selected to represent the conceptualization and organization of ideas. Ideation, like linguistic comprehension, is contingent in large measure on language proficiency, including vocabulary knowledge, morphological awareness, and semantax. In the case of written translation processes, this ideation is constrained by the conceptual understanding derived from reading the original prompt in the target language. Even if there is comprehension in the reading language, however, an accurate translation is contingent on sufficient proficiency in the target language. Thus, the translation rendered is a product of the biliterate individual's cross-linguistic overlap.

The integration of the SVR and SVW in translation as a function of cross-linguistic overlap can be illustrated through Kintsch's (1988, 2004) four-step process in his construction-integration model: 1) forming the concepts directly related to the linguistic output; 2) expanding these concepts through the selection of relevant knowledge; 3) inferring additional connections; and 4) determining the strength of relationships between generated concepts (see Kintsch, 1988). Thus, the process of cross-linguistic overlap requires a biliterate reader to first

form concepts in the prompt language, then expand and infer similar concepts in the target language, and, finally, the biliterate reader selects appropriately related concepts in the target language, thus rendering a translation. These interrelated processes are summarized in Figure 1.

Figure 1. Written Translation Process Model



The Present Study

It is within these converging theoretical frameworks that we conceptualized and designed the Biliteracy Translation Measure (BTM). Theoretically, an individual who can perform well on the BTM ought to possess reasonable skills in both Spanish and English, a finding that would establish the BTM as a single measure capable of indexing language and literacy in two languages. Procedures for developing, administering, and scoring the BTM are next described, followed by a report of a field test of the BTM with analyses of the relationships between the BTM and monolingual indicators of Spanish and English. Our work was guided by the following question: *Is there evidence to suggest that the BTM indexes bilingualism and biliteracy in Spanish and English?*

Method

Participants

Participants were part of a larger three-year study of language and literacy development among Spanish-English bilingual children in the United States from one school district in Massachusetts and one school district in Maryland. The language of all classroom instruction in both districts was exclusively English. Data were collected in the second year of the study from the students, who were determined to meet a very basic level of Spanish word reading. The initial pool of bilingual students in our sample consisted of 123 children in Grades 3 (n = 44), 4 (n = 45), and 5 (n = 34). All of these children were able to read in English; however, not all the children were able to read in Spanish. Given our interest in biliteracy, we needed a means by which to determine whether a student possessed some minimal degree of Spanish reading ability that allowed us to retain a reasonable sample with which to work. Thus, biliteracy was determined by assessing the students on their Spanish word recognition skills using the Woodcock-Muñoz Language Survey—Revised (WMLS-R) (Woodcock, Muñoz-Sandoval, Reuf, & Alvarado, 2005). We used the same starting point for each student: six Spanish words—*una, ser, al, del, lápiz,* and *suyo*—were presented, and students who read all six correctly were deemed to have a basic working knowledge of Spanish literacy and were considered biliterate. Students who misread one or more of these words were deemed to be English monoliterates and not considered for the current study. In either case, the measure was administered in its entirety so that a raw score could be calculated.

Of the initial 123 students, 62 met that basic threshold for Spanish reading. There were 19 students in Grade 3, 22 in Grade 4, and 21 in Grade 5. Nineteen of the students were from the Massachusetts district, while 43 were from the Maryland district.

Measures

Participants were administered a compilation of standardized and researcher-developed parallel assessments in Spanish and English, selected to represent the range of language and literacy skills outlined in the theoretical framework guiding the study. Linguistic comprehension was captured with measures of expressive vocabulary, morphological awareness, and semantax. Literacy skills were captured through indicators of word recognition and reading comprehension. Descriptions of these measures, and their associated reliability indicators, are found in Table 1.

Table 1
Overview of Measures

Language Constructs	Measure	Description	Internal Consistency (English)
Expressive Vocabulary	WMLS-R	Student names pictured objects of increasing difficulty until 6 consecutive errors	0.90 and 0.92 for 8- and 11-year-olds, respectively
Morphology*	Extract the Base	Student writes a response to a cloze sentence requiring the base of a word be extracted (e.g., FARMER → My uncle works on a ___(farm)___	0.98 for fifth-grade students
Semantax	CELF	Student is shown a picture and given a target word (e.g., "children") and uses target word to describe the picture	0.8–0.82 for ages 7.0–9.11
Literacy Constructs			
Decoding	WMLS-R	Student reads individual words until 6 consecutive errors	0.98 and 0.96 for 8- and 11-year-olds, respectively
Reading	WMLS-R	Student reads cloze passages and provides an oral response to missing word until 5 consecutive errors	0.81 and 0.91 for 8- and 11-year-olds, respectively

*Note: ** = Researcher-developed. WMLS-R = Woodcock-Muñoz Language Survey—Revised (Woodcock, Muñoz-Sandoval, Ruef, & Alvarado, 2005); Extract the Base = researcher-developed morphological decomposition task (August, Kenyon, Malabonga, Louguit, & Caglarcan, 2001); CELF = Clinical Evaluation of Language Fundamentals (Semel, Wiig, & Secord, 2003). Metalinguistic measures were administered in English only.

Biliteracy Translation Measure

The BTM was developed by a team of five Spanish-English bilingual language and literacy researchers. Two of the researchers were native Spanish speakers from Bolivia and Chile, and the other three were native English speakers from the United States. Given the theoretical considerations outlined above, we sought to develop a set of sentences that would require students to comprehend across semantic and syntactic contexts to be able to capture a linguistic range commonly deployed in academic texts in upper elementary school. Systemic functional linguistics (SFL) (Brisk, 2012; Halliday, 1989; Martin & Rose, 2008; Schleppegrell & Go, 2007) is a linguistic framework used to guide our thinking about relevant syntactic range of the target sentences.

Brisk (2012) explains that "the writing practices of English-speaking cultures are characterized by recurrent forms of texts used for specific purposes, with specific discourse organization and language features" (p. 448). Five syntactic domains were identified as being indicative of the recurrent linguistic forms that children encounter in both narrative and informational texts in upper elementary school; these were: the timeless present, the past, the future, the imperative, and the subjunctive. From an SFL perspective, syntax assumes a great deal of significance, as it signals the purpose of a given text (Schleppegrell, 2004). For example, reading or writing a procedure typically requires the imperative; reports and explanations are written in the present; recounts and narratives most often occur in the past; predictions,

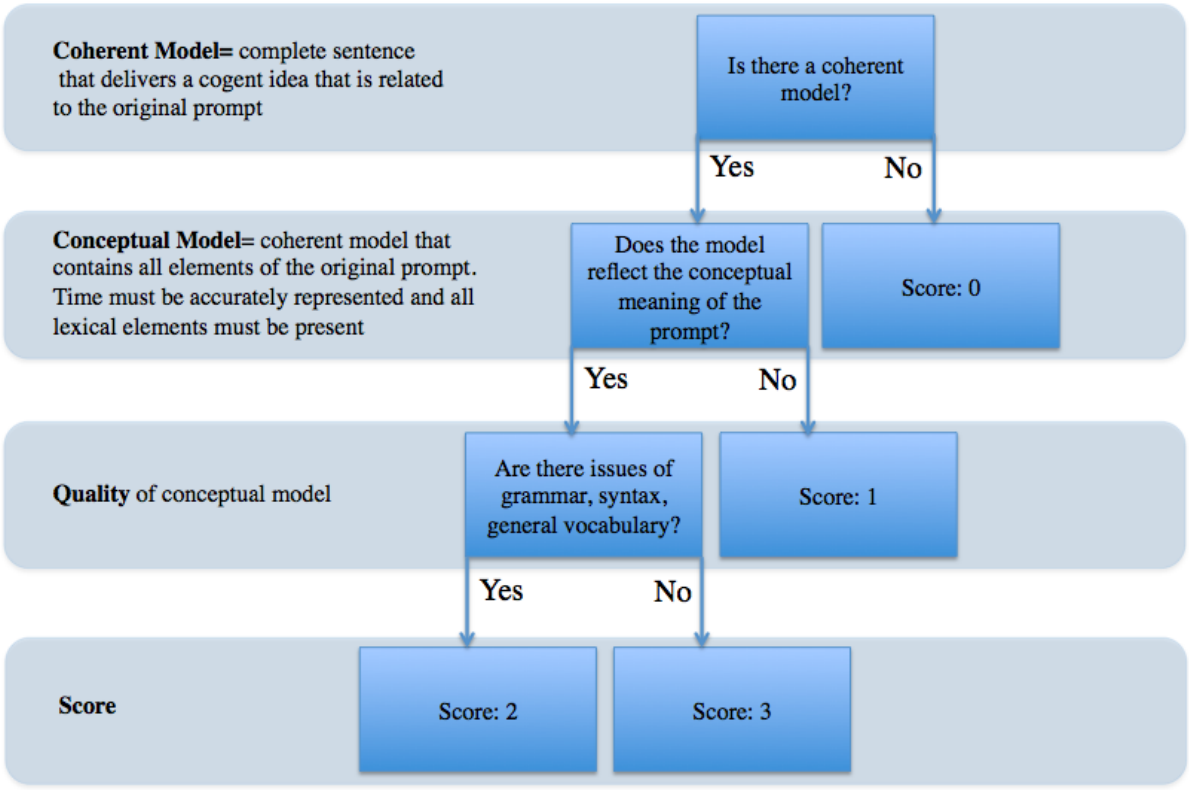
whether in the form of hypotheses for science or a picture walk in the language arts classroom, require the future tense. Finally, cause-effect relationships, which are often signaled by use of the subjunctive, are extremely important across the content area.

Having established the syntactic constructs, we set out to develop two sections of the BTM: Spanish sentences to be translated to English, and English sentences to be translated into Spanish. Each tense was represented by a single sentence, and we worked to ensure that the vocabulary load of the sentences (i.e., the lexile level and related grade equivalent), along with the syntactic construct, were comparable; we finished with a total of five sentences for each language (10 total for both languages). An overview of all the BTM items, their translation, tense, and lexile level, can be reviewed in Appendix A. The average lexile levels for both languages were comparable (i.e., 626 for Spanish sentences vs. 640 for English sentences).

Administration. The BTM was administered in small groups by a Spanish-English bilingual and biliterate researcher. The administrator read scripted directions that explained translation as the task of reading something in one language and then changing it into another language, but keeping the same meaning. The administrator then completed two practice items with the students, one per language. Participants were then instructed to complete the assessment individually. Students independently wrote their sentence translations; they were given as much time as necessary to complete the assessment, with few students taking more than 30 to finish both the Spanish-English (SE) and English-Spanish forms.

Scoring. The BTM comprises two parts: an SE section and an ES section. Each sentence translation was scored 0, 1, 2, or 3, with 3 representing a fully accurate translation. Students received an SE score (0–15 possible points), an ES score (0–15 possible points), and a total biliteracy score (0–30 possible points). To assess the translations, we developed a scoring flow chart asking that asked a series of questions that allowed for reliable and strict scoring. A translation received a score of 0 if there was either a non-response or a non-coherent sentence. If the translation was a complete sentence that delivered a *coherent model* related to the prompt, we then asked whether all lexical items were present and accurate, and if tense was accurately represented. If the answer to any of these checks was no, the translation received a 1. If the answer was yes, we then assumed the existence of full *conceptual mode*l; then, we finally asked whether there were issues of vocabulary, semantics, morphology, or syntax that made the translation accurate but non-native-like. If the answer was yes, the translation received a 2. If the answer was no, the translation received a 3. See Figure 2 for the scoring flow chart. For the purpose of this study, we did not consider spelling in our scoring process. Invented spelling items that were decodable and phonetically plausible (e.g., *kaye = calle*) were accepted; examples that were phonologically unrecognizable, however, were treated as vocabulary issues at the level of the *coherent model.*

Figure 2. BTM Scoring Flow Chart ("No" responses to each proposed scoring question are indexed on the right side of the scoring tree, while "yes" responses follow along the left side of the scoring tree.)



The BTM was scored by two raters (the first two authors), who scored each assessment separately. Once the scoring was done, the two raters met, and all discrepancies were resolved for 100% agreement. Inter-rater agreement averaged 87% and ranged from a low of 50% to a high of 100%, with 90% representing median agreement. See Appendix B for student-generated examples within each scoring category.

Results

Table 2 provides the descriptive scores and correlations among the measured language and literacy variables as well as SE, ES, and total scores on the BTM. Average performance on the BTM was 13.97 (SD = 6.49). Average SE (Spanish prompt—English translation) score was 7.61 (SD = 3.67), while average ES (English prompt–Spanish translation) score was 6.35 (SD = 3.44). A paired-sample *t*-test revealed that the students' average performance in translating from Spanish into English was significantly higher than their performance translating English into Spanish (t [62] = 3.42, p = .001). There were no effects of grade on BTM performance (F [2, 61] = .023, p = .977).

All Spanish language and literacy variables were significantly and positively correlated with one another, save for the association between Spanish decoding and semantax. Similarly, all English language and literacy variables were significantly and positively associated with one

another. Cross-linguistically, correlations between Spanish and English language variables were either non-significant or significantly negatively correlated. Similarly, all Spanish language variables were negatively associated with English literacy, and vice versa. The only notable positive cross-linguistic association was between Spanish and English decoding (r = 0.22, p = 0.087).

Given the fact that virtually all cross-linguistic associations were negative, it was noteworthy that scores on the BTM were uniformly positively correlated with all Spanish and English language and literacy outcomes. Also noteworthy was that the SE translation scores were significantly associated with Spanish reading and all English language and literacy indicators. ES translation scores were significantly associated with all Spanish language and literacy indicators, and with English decoding and morphology. Finally, the BTM total score was significantly and positively associated with all Spanish and English language and literacy indicators.

Table 2

Correlations, Means, and Standard Deviations of Measured Variables Used in Assessing the Usefulness of the BTM in Indexing Bilingualism and Biliteracy

	1	2	3	4	5	6	7	8	9	10	11	12	13
Spanish Language													
1. Vocabulary	--												
2. Morphology	**0.59**	--											
3. Semantax	**0.61**	**0.35**	--										
Spanish Literacy													
4. Decoding	**0.51**	**0.69**	0.21	--									
5. Reading	**0.67**	**0.74**	**0.35**	**0.62**	--								
English Language													
6. Vocabulary	**-0.39**	**-0.31**	0.05	**-0.36**	**-0.29**	--							
7. Morphology	**-0.36**	-0.15	0.09	-0.16	-0.13	**0.79**	--						
8. Semantax	**-0.34**	-0.19	0.11	**-0.31**	-0.25	**0.83**	**0.83**	--					
English Literacy													
9. Decoding	-0.03	-0.05	-0.1	0.22	-0.09	**0.42**	**0.63**	**0.52**	--				
10. Reading	**-0.3**	**-0.27**	0.13	**-0.26**	-0.22	**0.78**	**0.76**	**0.81**	**0.48**	--			
BTM Scores													
11. BTM SE	0.23	0.25	0.24	0.25	**0.27**	**0.42**	**0.61**	**0.47**	**0.61**	**0.47**	--		
12. BTM ES	**0.39**	**0.53**	**0.33**	**0.44**	**0.55**	0.19	**0.36**	0.16	**0.34**	0.23	**0.67**	--	
13. BTM Total	**0.34**	**0.42**	**0.31**	**0.37**	**0.45**	**0.34**	**0.53**	**0.35**	**0.52**	**0.38**	**0.92**	**0.91**	--
Means (sd)	27.2 (7.5)	32.1 (12.0)	25.6 (8.5)	40.2 (10.5)	13.7 (4.3)	28.7 (6.8)	38.9 (10.7)	32.2 (11.6)	46.8 (9.8)	18.4 (3.6)	7.6 (3.7)	6.4 (3.4)	14 (6.5)

Note: Correlations in bold are significant at the $p < .05$ level. BTM SE = Spanish-English translation score; BTM ES = English-Spanish translation score; BTM Total = SE + ES score.

Discussion

This study sought to develop and pilot the BTM and examine its utility for indexing literacy performance in Spanish and English. Results provide very preliminary evidence that the BTM does in fact index domains of language, reading, and writing in both Spanish and English. The total BTM score was significantly and moderately correlated with all English and Spanish measures (*r* range = 0.31–0.53; all *p*s < .05). To our knowledge, no measures currently exist that attempt to tap language and literacy among bilinguals as a single construct.

The BTM is a measure that was derived with the assumption that biliterate individuals possess lexical knowledge in two languages that is mediated through shared conceptual knowledge (Cummins, 1991; Francis, 2005; Kroll & Stewart, 1994). Recent research in cognitive psychology by Gullifer, Kroll, and Dussias (2013) has suggested that when Spanish-English bilinguals read sentences in either Spanish or English, both languages were active. Our emergent findings here support this particular idea, and suggest that the BTM does capture simultaneous dual-language ability (i.e., biliteracy). Thus, the present study further illustrates that a biliterate's language processes do not work in isolation of one another.

From a schooling perspective, a parsimonious measure of biliteracy could be of great value. First, an assessment that accounts for child's dual language and literacy ability allows for a more holistic understanding of a bilingual child's cognitive processes, permitting a more accurate representation of that child's linguistic strengths. Indeed, this knowledge can better inform practitioners in the special education referral process of bilingual students; and, while this assessment cannot account for all variability, it does at least allow a bilingual student to leverage strengths from both languages. As bilingual theory suggests, language processes are shared, and thus schools should have a tool that provides information to teachers about students' strengths and weaknesses across languages, rather than just within language. Thus, from a research perspective, this domain of inquiry seems ripe for investigation, and more hypotheses of how biliteracy and its development relate to achievement and even public health outcomes might be explored in a fashion not currently available to researchers.

Limitations

While we have found utility in the use of the BTM as an index for bilingualism and biliteracy, we do acknowledge limitations within our study. First, our sample size is limited to 62 Spanish-English bilinguals in the elementary school. Our sample was English-dominant and did not receive any language or literacy instruction in Spanish; the balance between English and Spanish ability was not uniform, and overall Spanish performance was underwhelming. Further, our sample was selected based on students' ability to complete the letter-word identification task of the WMLS-R (Woodcock et al., 2005), a test that accounts only for Spanish-literate ability. The use of the WMLS-R subtest in our selection process was a very generous means by which to assume reading ability in Spanish. Finally, in contrast to the majority of cross-language research with adults, our sample had few, if any, "balanced bilinguals"; indeed, the lack of variation within our sample limits our implications to Spanish-English bilinguals who are primarily English-dominant. In order to better examine the utility of written translation as an index for bilingualism and biliteracy, a more diverse sample of biliterate individuals is needed.

Implications and Future Research

In the field of bilingualism and biliteracy, we must first move beyond the idea that bilingual ability is the product of two different language skill sets, and instead conceptualize bilingualism and bilitearcy along a simultaneous dual-language continuum. Thus, researchers and educators alike could benefit from a single tool that could assess a bilingual child's language and literacy ability. Second, if written translation may serve as a platform for measuring biliteracy, then future research should explore this idea with a more diverse sample of biliterate individuals. Finally, we suggest the practical use of the BTM as a tool for indexing biliterate development. Indeed, the BTM could help better address issues of assessment with culturally and linguistic diverse students. In order to truly capture bilingual ability, future researchers and educators should be more cognizant of the overlapping relationship across languages.

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Appendices

Appendix A

BTM Sentence-Level Items, Translations, Part of Speech/Tense, and Lexile Level (Grade Equivalent)

Spanish-English Sentence Level	Translation	Tense	Lexile (GE)
Las plantas necesitan de una cierta cantidad de luz para sobrevivir.	Plants need a certain amount of light to survive.	Timeless Present	640 (3/4)
El mejor equipo de fútbol ganó el largo partido.	The best soccer team won the long game.	Past	600 (4)
Limpia tu cuarto antes de salir a jugar con tus amigos.	Clean your room before going out to play with your friends.	Imperative	650 (3/4)
La niña y su familia irán a una playa nueva en mayo.	The girl and her family will go (are going to go) to a new beach in May.	Future	640 (3/4)
No creo que tu tía venga a vernos esta tarde.	I don't believe (think) that your aunt will come to see us this afternoon.	Subjunctive	600 (3)
Spanish-English Sentence Level			
Animals must eat food to provide energy to their bodies.	Los animales deben comer (comida, alimentos) para proveer de (entregarle, proporcionar) energía a sus cuerpos.	Timeless Present	710 (3/4)
The children went to see a funny movie and laughed a lot.	Los niños fueron a ver una película divertida y se rieron mucho (demasiado).	Past	620 (3)
Be careful when you cross the street at night.	Ten (tenga) cuidado cuando cruces (al cruzar) la calle en (durante, por) la noche.	Imperative	460 (2)
Next Saturday, I will play soccer with my little brother in the park.	El próximo sábado (El sábado que viene) voy a jugar (jugaré) fútbol con mi hermano menor (pequeño, hermanito) en el parque.	Future	790 (5)
If my father were not with me today, I would feel sad.	Si mi padre no estuviera (estuviese) conmigo hoy, yo estaría (me sentiría) triste.	Subjunctive	620 (3)

Appendix B

Student-Generated Examples and Respective Scores Aligned with Scoring Flow Chart Depicted in Figure 2

English-Spanish Prompt (Target translation)	Student Translation	Coherent Model?	Conceptual Model?	Language Issues?	Score
Be careful when you cross the street at night. *(Ten/tenga/tengas cuidado cuando cruces/cruce/cruces la calle por la noche.)*	con qeda a crosar ha qalle en la noche	N	n/a	n/a	0
	Ten kiedado kuando pases la kaye.	Y	N	n/a	1
	Ten cuioaoo couando cruzen la calle esta noche.	Y	Y	Y	2
	Ten cuidado cuando cruses la calle en al noche	Y	Y	N	3
Spanish-English Prompt (*Target translation*)					
La niña y su familia irán a una playa nueva en mayo. *(The girl and her family will go [are going to] to a new beach in May.)*	The night of family of May.	N	n/a	n/a	0
	The girl and her family went to a new beach in May.	Y	N	n/a	1
	The girl and her family are going to the new beach on May.	Y	Y	Y	2
	The girl and her family will go to a new beach in May.	Y	Y	N	3