Imagination Station (Istation): Istation's Indicators of Progress (ISIP) Español Validity Study PreKindergarten Report

Deni Basaraba • Anthony Sparks • Leanne R. Ketterlin-Geller •

Southern Methodist University

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Introduction

As of 2017, Hispanic English Learners (ELs) constituted 77.1% of the entire EL population (National Center for Educational Statistics, 2017). Although not all ELs are at-risk for not demonstrating grade-level proficiency in English Language Arts and Literacy, examination of multi-year trend data for the English *Reading* subtest of the National Assessment of Educational Progress [NAEP] comparing the performance of ELs and non-ELs of students in Grades 4 and 8 reveals that ELs persistently earn scores that are significantly lower than their non-EL peers (USDOE, 2017). One viable option for supporting the literacy development of ELs is to capitalize on their native-language skills by building on theories of cross-linguistic transfer (Cummins, 1979; Lado, 1964) that serve as the foundation for the increasing number of bilingual education programs offered in schools across the United States to support the development of ELs' language and literacy skills in their native language (L1) and their second language (L2; English). As of 2015, for example, most states provided additional funding to schools to support ELs while six states offered funding specifically for bilingual (dual language) programs (USDOE, OELA, 2015).

Similar to establishing prevention-oriented systems to monitor the acquisition of early literacy skills for students learning to read in English, those working in dual language programs supporting the development of foundational early literacy skills in Spanish will benefit from the availability of evidence-based, technically adequate (e.g., reliable and valid) universal screening assessments in Spanish. However, a review of the available research indicates few studies have been conducted describing the development and/or exploring the technically adequacy of the few Spanish universal screening reading assessments available to help educators monitor students' acquisition of Spanish literacy skills (Keller-Marguilis & Mercer, 2014; Keller-Marguilis, Payan, & Booth, 2012). The current study aims to contribute to this nascent body of literature by examining the technical adequacy (e.g., reliability, validity, and classification accuracy) of the IStation *Lectura Temprana* (ISIP Español LT) assessment for students in PreKindergarten.

Results from universal screening assessments, such as the *ISIP Español*, can help educators identify students who are on-track and not on-track for reaching Spanish learning goals. These same assessments can also be used to determine the intensity of instructional support that students may need to achieve these learning goals and demonstrate proficiency with grade-level content and skills by the end of the school year (Glover & Albers, 2007). Supporting educators in their decision-making processes related to this instructional support, however, requires that they have access to appropriate student assessment data that is substantiated by multiple sources of relevant evidence (AERA, APA, & NCME, 2014).

Reliability and validity are two sources of evidence commonly used to evaluate tests. Reliability generally refers to the consistency of measurement, while validity refers to the degree that

interpretations made using test scores are appropriate, meaningful, and useful (AERA, APA, & NCME, 2014). Classification accuracy analyses, which provides a specific source of predictive validity evidence by providing evidence of the extent to which a universal screening assessment can accurately differentiate between those who will be on-track or not on-track for not meeting grade-level expectations, is an increasingly popular method for evaluating universal screening assessments (Glovers & Albers, 2007). The purpose of this study was to determine the appropriateness or technical adequacy of *ISIP Español LT* for making screening decisions for students in PreKindergarten and to summarize the results from this study.

Method

In this section, we describe the methods used to conduct the validity study to gather evidence for the Istation Indicators of Progress Español (*ISIP Español*), including: (a) participants, (b) measures, (c) hiring and training of data collectors, and (d) analyses.

Participants

Data for this study were collected from two geographically distinct school districts in Texas during the 2017-2018 school year. Students in PreK were enrolled in one of four elementary schools receiving instruction from four teachers who agreed to participate in our study. Our total sample included 101 students, although not all students completed all assessments. We present the distribution of students by district and school in Table 1. The names of the participating school districts have been removed from this report.

Table 1
Distribution of Participating Students by District

State	District	Schools	PreK
TX	C	3	90
TX	D	1	11
Total		4	101

Table 2 presents the demographic distribution of students.

Table 2.
Demographic Distribution of Participating Students by Grade Level

Demographic Subgroup*	PK
Gender	
Male	43.56%
Female	46.53%
Hispanic/Latino	
Yes	93.62%
No	3.19%
Race/Ethnicity	
American Indian/Alaskan Native	55.45%

African American	0.00%
Hispanic/Latino	25.74%
White	25.74%
Economically Disadvantaged	
Yes	79.20%
No	10.89%
Limited English Proficient	
Yes	90.09%
No	9.90%
Special Education	
Yes	3.96%
No	86.14%

* Note: Rates of missing data varied by demographic subgroup but were no more than 8.5% for any given variable

Measures

In the sections that follow, we describe the three types of measures administered in this study: (1) reading assessments administered to students in PreK (universal screening and criterion assessments), (2) fidelity of assessment administration measures, and (3) a teacher survey designed to collect information about the instructional context within which participating students were receiving reading instruction and the assessments were administered.

The FastBridge and IGDIs assessments were used to obtain criterion-related evidence for the ISIP *Lectura Temprana* (*ISIP Español LT*) assessment. In Table 3 below, we categorize the assessments by grade level and critical domain of Spanish early reading skill(s) assessed. Specifically, to demonstrate the alignment in skills assessed by each of the assessments, we categorize them by one of the five critical domains of Spanish literacy they were designed to assess (e.g., phonological awareness, alphabetic understanding, fluency, vocabulary, or comprehension), plus language. For those assessments that included more subtests than we administered as part of this study, we use an asterisk (*) to denote those subtests that were administered. For example, the following item types (ISIP Español LT) and subtests were used to assess students' phonological awareness skills: Initial Sounds and Blending (ISIP Español LT), Onset Sounds and Phoneme Segmenting (FastBridge Early Reading Spanish), and First Sounds (IGDIs).

Table 3

Reading Domain	ISIP Español	FastBridge	IGDIs
Phonemic & Phonological Awareness	• Initial Sounds* • Blending*	• Onset Sounds* • Word Rhyming • Word Blending	• Blending • What Word is Left? • Rhyming • First Sounds* • Detection
Alphabetic Understanding (Phonics)	• Phoneme-grapheme conversion* • Phoneme & syllable awareness*	• Letter Names • Letter Sounds* • Decodable Words • Syllable Reading*	• Letter Naming (Expressive)* • Letter Naming (Receptive) • Letter Detection • Sound Identification*
Fluency	• Maze*	• Sentence Reading	•
Vocabulary	• Oral Vocabulary • Reading* Vocabulary*	• Oral Repetition	• Picture Naming* • Expressive Verbs* • Definitions (Expressive) • Receptive Verbs • Definitions (Receptive)
Comprehension	• Listening Comprehension		• Story Comprehension: Recall & Prediction • Let's Go to the Store!
Language			• Categories • Functions • Analogies • Which One Doesn't Belong? • Linguistic Interaction • Let's talk!

Note: Subtests/item types administered as part of this study are marked with an asterisk.

Universal Screening Assessments

The universal screening assessments included: ISIP Español *Lectura Temprana* (*ISIP Español LT*), and *FastBridge earlyReading Spanish* (FB ER).

ISIP Español Lectura Temprana (ISIP Español LT)

ISIP Español LT is a computerized adaptive test designed to provide teachers with tools for continuous progress monitoring of K-3 students' development in five critical domains of Spanish early reading: (1) phonemic and phonological awareness, (2) alphabetic understanding, (3) fluency with connected text, (4) vocabulary, and (5) comprehension. Standardized scale scores, the corresponding standard error, and recommended instructional tier are reported for each of these five domains, as well as an overall composite score that represents student performance across the domain. Each domain is assessed by one or more subtests, which we describe in brief detail below (for additional details, including screenshots of the item types, see Istation, 2016).

- *Destreza fonológica y fonética [Phonemic and Phonological Awareness]:* Phonemic awareness refers to the ability to hear, identify, and manipulate individual sounds (or phonemes) in spoken words (National Reading Panel, 2000). Four types of items comprise the *Destreza fonológica y fonética* subtest: (1) *conversión grafema-fonema* [phoneme-grapheme conversion], (2) *conciencia fonética y silábica* [phoneme and syllable awareness], (3) *sonidos iniciales* [initial sounds], and (4*) unión de sílabas* [blending]. Phoneme-grapheme conversion items measure students' ability to identify the symbols that correspond to specific sounds of the Spanish language, including letters, syllables, vowel combinations, consonant clusters, and words. Phoneme and syllable awareness items measure students' ability to identify single sounds (letters *or* syllables) in grade-level appropriate words. Initial sound items require students to identify the beginning sound of words presented on the computer screen following the narrators instruction while blending items measure students' ability to identify blended phonemes or syllables presented orally.
- *Lectura con fluidez [Text Fluency]:* In this subtest, students are presented a passage of connected text with every seventh word omitted. Three options for each omitted word (blank) are provided and students are tasked with choosing the word that makes the most sense to complete the sentence. Students have two and a half minutes (2:30 min) to complete this maze task. Prior research indicates this task is highly correlated with measures of fluency and accuracy.
- *Vocabulario [Vocabulary]:* The Vocabulary subtest within the ISIP Español is comprised of two developmentally appropriate item types. *Vocabulario de lenguaje oral [Oral Vocabulary]* items are presented for students in the younger grades who likely have insufficient decoding skills to be able to read words presented on the computer screen, Instead, during the oral vocabulary subtest, four pictures are presented on the screen and orally identified by the narrator. The narrator then asks the student to identify the word that best illustrates the spoken word orally. The item structure for the *Vocabulario para lectura y escrita [Reading Vocabulary]* is similar, except a combination of word strategies (e.g., roots, prefixes, suffixes) are presented to the student using both pictures and words that appear in sets of four on the screen. Students are asked to respond to

questions that assess their understanding of different parts of word knowledge, such as word families (derivatives), word classifications, and synonyms.

- *Comprensión [Comprehension]:* Similarly, the Comprehension subtest is comprised of two developmentally appropriate tasks. The *Comprensión auditiva [Listening Comprehension]* subtest is designed to assess students' ability to listen, understand, and answer questions related to a story that is presented orally. Although a picture related to the short story is presented on the screen, no text appears as the narrator reads the story aloud. Once the narrator has finished reading the story, he/she then asks the student a question related to the story, and the student is presented with four pictures and is asked to choose the one that best answers the question. In contrast, the *Comprensión de lectura [Reading Comprehension]* subtest requires students to read a passage of connected narrative or expository text. Once the student has finished reading, he/she clicks a green button to indicate he/she has finished reading the passage and is then presented with a number of questions designed to elicit students' inferential and evidential thinking. Each question is accompanied by four response options and students are asked to identify the most appropriate response; kindergarten students select from pictures that represent each answer choice.

FAST Assessments

For the purposes of this study, the FastBridge Early Reading Spanish (FB ER Spanish) served as the competitor's universal screening assessment that we used to collect additional criterion-related validity evidence for the *ISIP Español LT* universal screening assessments. We describe these assessments (and their corresponding subtests) in the sections that follow.

In Table 4, we present the FastBridge subtests administered in this study, by season.

Table 4
FastBridge Administration Timeline (by Season)

	PreKindergarten	
FastBridge Assessment	Winter	Spring
Concepts of Print	X	X
Onset Sounds	X	X
Letter Sounds	X	X
Syllable Reading	X	X

FastBridge Early Reading Spanish (FB ER Spanish)

Similar to the *ISIP Español LT*, the multiple subtests of FB ER Spanish are designed to assess students' development of critical foundational skills for learning to read in Spanish: (1) phonemic and phonological awareness, (2) alphabetic understanding, and (3) fluency with connected text. Three alternate forms are available for individual administration using either a paper-pencil or computer delivery format. In Figure 1 below we present a list of the 13 subtests that are available as part of the FB ER Spanish assessment system; however, in the sections that follow we describe and present technical adequacy information for only those subtests that were administered as part of our study:

Figure 1
FastBridge Early Reading Subtests

Subtest Name	Subtest Description
• Concepts of Print	• Demonstrate print awareness (e.g., proper page orientation, accurate print tracking, locate beginning/end of sentences)
• Onset Sounds	• Identify which picture begins with a particular sound
• Letter Sounds	• Identify correct sounds for uppercase and lowercase Spanish letters
• Syllable Reading	• Read phonetically regular Spanish nonsense words of varying syllable lengths

Spanish Concepts of Print: The goal of this untimed subtest is to assess the print awareness of students in grades PreKindergarten and Kindergarten by asking them to complete a series of print-awareness tasks. These tasks include: (a) page orientation, (b) identifying specified shapes/objects on a page (e.g., circle, letter, word, sentence, etc.), and (c) identifying a given word from two possible word options (e.g., *Mira estas dos palabras. Una es la palabra <u>TORO</u> y la otra es la palabra <u>TORONJA</u>. ¿Cuál de las dos es la palabra <u>TORO</u>? [Look at these two words. One is the word <u>BULL</u> and the other is the word <u>GRAPEFRUIT.</u> Which of the two is the word <u>BULL?</u>).* The subtest ends when the student has responded to all 12 items or if the test administrator has had to discontinue the task; the task is discontinued if the student responds to the first 4 consecutive items incorrectly. One point is awarded for each correct response and zero points are awarded if the student points to another part of the page (other than that specified), provides an incorrect response, or provides no response. The following scores are reported for the Spanish Concepts of Print task: total items correct, percentage of items correct (accuracy), and number of items correct per minute. According to information reported on the National Center on Response to Intervention (NCRTI) screening tools chart, median α for Kindergarten was 0.82 while split-half reliability was 0.86. This subtest was administered in our study as it is required to generate a FB ER Spanish Composite Score for PreKindergarten in Winter, and Spring.

Spanish Onset Sounds: During this task, which was designed to assess students' phonemic awareness skills, the test administrator presents the student with pages that contain four pictures, provides the word for each of the pictures, and asks the student to identify which picture begins with a particular sound (e.g., *This is baby, backpack, bear, and elephant. Which of these pictures begins with the sound /e/?*). The subtest is untimed but test administrators are expected to time the student during the administration of the subtest and record the amount of time it took the student to complete the task so that the students' rate of performance (items correct per minute) can be calculated. The subtest ends when the student has responded to all 16 items or if the administrator has had to discontinue the task; the task is discontinued if a student responds to the first four consecutive items incorrectly. One point is awarded for each correct onset sound provided and zero points are awarded if the student provides an incorrect sound or does not respond; if the student pauses for 5 seconds without responding the test administrator is directed

to score the item as incorrect and proceed with the next item. The following scores are reported for the Spanish Onset Sounds task: total items, total items correct, accuracy, and items correct per minute. According to the technical adequacy information reported on the NCRTI tools chart, delayed test-retest reliability was $r = .48$ for Fall-Winter and Fall-Spring administrations, $\alpha = .87$ split-half reliability equaled .87. This subtest was administered as part of our study as it is required to generate a FB ER Spanish Composite Score in Winter and Spring for PreK.

Letter Sounds Spanish: This subtest was designed to assess students' accuracy and automaticity identifying the sounds for Spanish letters (presented in lower case only). This subtest is timed and students have 1 minute to identify as many letter sounds as they can from a page with three sections of sounds; the first section includes unique letter sounds, the second section includes repeated letter sounds, and the third section includes letters with dual sounds. Test administrators are directed to have students complete the first and sections as needed until the 1 minute time is completed; completion of the third section is an optional way to receive an inventory of all known and unknown dual sounds. The task ends either when the 1 minute duration is complete or when he/she has identified sounds for all letters presented. If the student finishes before the 1 minute timing has end, the system automatically adjusts the sounds per minute score accordingly. The task is discontinued if the student is unable to correctly identify any sounds within the first 10 letters. One point is awarded for each correctly identified letter sound and zero points are awarded if the student provides an incorrect response or provides no response. If the student hesitates for 3 seconds without responding the test administrator is directed to score the item as incorrect, to provide the letter sound, and have the student continue with the next letter. The following scores are reported for the Letter Sounds task: number of items attempted, number of correct letter sounds identified in one minute, accuracy, and a ratio of the total correct letter sounds/total sounds in one minute. According to the technical adequacy information reported on the NCRTI tools chart, delayed test-retest reliability ranged from $r = .43 - .44$, coefficient alpha ranged from $\alpha = .80 - .98$, and split-half reliability ranged from $\kappa = .84 - .99$. This subtest was administered in our study as it is required to generate a FB ER Spanish Composite Score for Winter and Spring test administrations in PreK.

Syllable Reading Spanish: This subtest was designed to assess students' alphabetic understanding skills by measuring their ability to read phonetically regular pseudo-words, or words that are phonetically regular (i.e., follow the phoneme-grapheme correspondence rules of Spanish) but may not be real words. This task begins with two sample activities during which the test administrator models for the student how to read syllables. Once it is clear the student understand the task, the test administrator presents the student with a page of phonetically regular syllables and asks the student to do his/her best to read the syllables on the page from left to right. If the student starts with a different task (e.g., reading letter names, letter sounds, or telling a story), the test administrator is advised to pause the timer, redirect the student, and continue with the subtest administration. Timing for this one minute subtest begins when the student says the first syllable and ends either at the end of one minute or if the student reads all of the syllables before the minute has ended, in which case the test administrator stops the timer and selects the "Mark Last Response" button. This subtest is discontinued if the student is unable to identify any syllables correct in the first 10 syllables. One point is awarded for each syllable read correctly and zero points are awarded if the student reads a syllable incorrectly, substitutes the given syllable with another syllable, reverses or misreads the syllable, or pauses for 3 or more

seconds between responses. The following scores are reported for the Syllable Reading Spanish subtest: total items attempted, number of correct syllables read, number of correct syllables read in 1 minute, and accuracy. This subtest was administered in our study because it is required to generate a FB ER Spanish Composite Score for the Winter and Spring for PreK.

Criterion Assessments

The criterion assessments administered included the *Spanish Individual Growth and Development Indicators* (IGDIs Español).

Spanish Individual Growth and Development Indicators (IGDIs Español)

Similar to FastBridge, the IGDIs-Español is comprised of multiple subtests designed to assess students' proficiency with discrete early literacy skills, only some of which were administered as part of this study. All subtests are untimed. To ensure that children completely understand the task before each subtest begins, each subtest is prefaced by 3 or 4 examples in which the test administrator first models the task for the student and then asks the student to try and complete the task. The administration manual includes precise directions for test administrator actions (e.g., how/when to display pictures to the child) as well as scripted language for providing corrective feedback and providing additional practice opportunities, if needed. In Figure 2 below we provide the names and brief descriptions of each of the subtests available as part of the IGDIs-Español and then, in the sections that follow, describe in more detail the five subtests administered during our study.

Figure 2
Spanish Individual Growth and Development Indicators (IGDIs) Subtests

Domain	Subtest Name	Subtest Description
Oral Language	• Denominación de los Dibujos [Picture Identification]	• Name images of common and culturally-relevant objects (e.g., animals, food, etc.)
	• Verbos Expresivos [Expressive Verbs]	• Identify the action being portrayed in a given picture in response to the question, *¿Qué está pasando?* [What is happening?]
	• Verbos Receptivos [Receptive Verbs]	• Match the action described by the test administrator to an image depicted on a card with 2-3 images
	• Storybook / ¡Vamos a la tienda!	• Respond to questions centered on the context of a trip to the grocery store
	• Funciones [Functions]	• Identify the function of images common and culturally-relevant objects (e.g., household objects, toys, everyday nouns, etc.) in response to the question *¿Para qué sirve?* [What is this object used for?]
Phonological Awareness	• Primeros Sonidos [First Sounds]	• Identify and discriminate between initial sounds of spoken words (independent of word meaning)
	• Mezclar [Blending]	• Blend two separately spoken phonemes (or sounds) together to form one word (e.g., /par/.../aguas/ = *paraguas*)
	• Rimar [Rhyming]	• Discriminate between the endings of words independent of word meaning by match the ending sound of a target word to a given word
	• ¿Qué palabra queda? [What Word is left?]	• Identify sound structure by identifying what word remains after one part of the word is omitted (elision)
Alphabet Knowledge	• Denominación de las Letras [Letter Naming]	• Use receptive language knowledge to point to the correct letter (out of 3 given letters) when test administrator says target letter name
	• Identificación de los Sonidos [Sound Identification]	• Identify target letter (out of 3 given letters) when provided with target letter sound

Denominación de los Dibujos [Picture Naming]: This subtest was designed to assess children's ability to produce spoken vocabulary words. In this task, the administrator tells the child, *Vamos a mirar estos ítems y decir qué son estos dibujos* [We are going to look at these items and name these pictures]. The test administrator first models the task for the student with two examples and then asks the student to try and complete the task. Once the example items have been completed and it is clear that the child understands the task, the administrator presents the pictures one at a

time to the student and asks, *¿Qué es?* or *¿Qué es esto?* [What is this?]. If the child hesitates for 3 seconds without providing a response, the test administrator is directed to prompt the child by asking, *¿Sabes qué es?* or *¿Qué es?* [Do you know what this is?]; if the child still does not respond after another 2 seconds, his/her response is recorded as DK/NR [Don't Know/No Response] and the test administrator provides the next item.

Verbos Expresivos [Expressive Verbs]: This subtest was designed to assess children's ability to accurately identify an action depicted in a picture. The subtest focuses specifically on verbs because of their salience in Spanish language acquisition. During this subtest, the test administrator first introduces the task, models successful completion of the task with two examples for the child, and then asks the child to complete two examples. For example, *Primero es mi turno. Te voy a decir lo que está pasando en el dibujo. Nadando. La niña está nadando* [First it's my turn. I'll tell you what is happening in the picture. Swimming. The girl is swimming]. Once the example items have been completed and it is clear the child understands the task, the administrator presents the pictures one at a time to the student and asks, *¿Qué está pasando en el dibujo?* [What is happening in the picture?]. If the child hesitates for 3 seconds, the administrator is directed to prompt the student again by asking, *¿Qué está pasando en el dibujo?* [What is happening in the picture?]; if the child still does not respond after another 2 seconds, his/her response is recorded as DK/NR [Don't Know/No Response] and the test administrator provides the next item.

Denominación de las Letras [Letter Naming]: This subtest was designed to assess children's ability to correctly distinguish between and know the names of the written letters of the alphabet. To introduce this subtest, the test administrator says, *Vamos a mirar estos ítems y encontrar la letra que te digo. Primero es mi turno. Voy a encontrar la letra A. Esta es la letra A* [We're going to look at these items and find the letter I say. First it's my turn. I am going to find the letter A. This letter is 'A']; as the administrator says '*Esta es la letra __*' he/she is directed to point to the letter for the student. Similar to other IGDIs subtests, the test administrator models the task twice for the student and has the student complete two examples independently before proceeding with test administration. During the subtest, the test administrator presents each item with its picture in front of the student and asks, *¿Cuál letra es ____?* or *Señala la letra ___* [Which letter is ___? or Show me the letter ___]. If the child hesitates for 3 seconds the test administrator is directed to prompt the student by using either of these prompts again; if, after 2 seconds, the child still hasn't provided a response, his/her response is recorded as DK/NR [Don't Know/No Response] and the test administrator provides the next item.

Identificación de los Sonidos [Sound Identification]: This subtest was designed to assess children's letter-sound correspondence knowledge by asking them to correctly identify the target letter once the administrator makes the target letter sound. The child responds to each item by pointing to the correct letter on a card that includes the target letter and two distractors. To introduce this subtest, the subtest, the test administrator says, *Vamos a mirar estos ítems y encontrar la letra que hace el sonido que te digo. Primaro es mi turno. Voy a señalar cuál letra hace el sonido /f/. Esta letra hace el sonido /f/* [We're going to look at these items and find the letter that makes the sound I say. First it's my turn. I'm going to show you which letter makes the sound /f/. This letter makes the found /f/]; as the administrator says *Esta letra hace el sonido /f/*, he/she is directed to point to the letter that makes the sound /f/. Similar to other IGDIs

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subtests, the test administrator models the task twice for the student and has the student complete two examples independently before proceeding with test administration. During the subtest, the test administrator presents each item with its picture in front of the student and asks, *¿Cuál letra hace el sonido _____?* [Which letter makes the sound ___?]. If the child hesitates for 3 seconds the test administrator is directed to prompt the student by using either of these prompts again; if, after 2 seconds, the child still hasn't provided a response, his/her response is recorded as DK/NR [Don't Know/No Response] and the test administrator provides the next item.

Primeros Sonidos [First Sounds]: This subtest assesses children's ability to identify and discriminate between the initial sounds of words independent of their word meaning. For this task, the administrator names each object pictured on a card and then provides the beginning sound of one of the objects pictured, the target sound. Children are asked to point to the picture corresponding to the object that begins with the target sound. For example: *Vamos a jugar un juego donde tenemos que encontrar el dibujo que empieza con el sonido que te voy a decir. Primero es mi turno. Rosa, bota* (pointing to each picture as it is named). *Ahora voy a encontrar el dibujo que empieza con /r/. Rosa* (point to rose), *rosa empieza con /r/. Escucha: /r/, rosa* [we're going to play a game where you find the one that <u>starts with</u> the sound I say. First it's my turn. Rose, boot. Now I'll find the one that starts with /r/. Rose, rose starts with /r/. Listen: /r/, rose]. The test administrators models successful completion of two examples for the child before asking the student to try two examples independently. Once it is clear that the child understands the task, each item in the subtest is presented using the following language: *Diga _____, _____. ¿Cuál de estos dibujos empieza con /____/?* (Always point to each images as you name it) [Say _____, _____. Which one starts with /__/?]. If the student hesitates for 3 seconds the test administrator is directed to prompt the student again using the same language. If the student still does not respond after another 2 seconds, his/her response is marked as DK/NR [Don't Know/No Response] and the test administrator presents the next item.

Hiring and Training of Data Collectors

To support standardized administration of the measures, we hired data collectors who were proficient (if not native) Spanish speakers and systematically trained them to administer each of the assessments that were not collected by school personnel (i.e., FB ER Spanish, FB CBMR Spanish, IGDIs Español, and Aprenda-3). In the sections that follow, we briefly describe our process for recruiting and hiring qualified data collectors, summarize data collector qualifications, and describe our efforts to ensure that data collectors were trained to administer the assessments with fidelity.

Recruiting and Hiring Data Collectors

Candidate recruitment efforts began with the development of a list of qualifications for the position. In particular, we wanted to make sure that prospective data collectors were fluent (if not native) Spanish speakers, had experience working with children, had experience using Microsoft Excel, and were available to administer the assessments during the school day. We drafted a flyer that included a description of the project, general duties, and list of qualifications that we

distributed to (a) students pursuing graduate degrees in Education and/or Spanish majors at a local university (b) several faculty in the World Languages department at that same university.

Data Collector Summary. Based on the recruitment and hiring processes described previously, we hired 8 data collectors (external to our organization) during the Winter test administration. Of these 8, all reported they were fluent in Spanish, 1 reported she had an Associate's degree, 3 (37.50%) reported they had a Bachelor's degree, and 1 reported she had a Ph.D.; of those with advanced degrees, 3 (37.50%) reported they had completed a Spanish major as part of their post-secondary education. Data collection efforts were supplemented by members of our project team and the Research in Mathematics Education (RME) unit as needed to administer the FastBridge assessments in the Winter to all participating students.

Because we knew data collection efforts would be more intense in the Spring (as we were tripling the number of assessments that needed to be given), we made a concerted effort to recruit and hire more data collectors to support this study. As a result of these efforts we hired 21 data collectors to help with the Spring data collection; of these 21, 6 were retained from the pool of Winter data collectors and 15 were new hires. Based on the qualifications and experience data reported by these data collectors, 15 (71.43%) reported on their resumes that they were fluent in Spanish. With respect to their prior educational experiences, 1 (4.76%) indicated her highest degree earned was a high school diploma, 2 of our data collectors (9.52%) had earned Associate's degrees, 8 (38.09%) had earned Bachelor's degrees, and 5 (23.81%) had earned Master's degree (these data were not reported for 4 data collectors). Six data collectors (28.57%) indicated they had completed an education major (e.g., Elementary Education, Child Learning & Development) or education-related teacher licensure endorsements (e.g., Elementary Bilingual/ESL certification) and 7 data collectors (33.33%) reported having prior experience working with children and/or conducting observations in classroom settings.

Data Collector Training

Prior to being scheduled to administer assessments with students in the schools, all data collectors had to complete administration and scoring trainings, demonstrate their proficiency with the standardized administration directions, and demonstrate interrater reliability for the assessments that were not administered in schools (i.e., FastBridge, and IGDIs-Español). In the sections that follow we briefly describe the training and certification processes for each assessment.

FastBridge ER: As part of their online system, FAST includes video demonstrations of administration and scoring, practice activities that allow users to practice administering and scoring, quizzes, and certification activities for each subtest. Although the quizzes and certification activities are currently not available online for the FB ER subtests, we were able to conduct certification check-outs with each data collector using the Observing and Rating Administrator Accuracy (ORAA) checklists available as part of the FAST system. These checklists require the observer to indicate whether the test administrator followed the specified administration procedures, provided the standardized administration directions, and (for timed subtests) operates the stopwatch as directed.

To simulate the required certification activities, the Project Coordinators conducted individual check-outs with each data collector in which they acted as the student and performed the tasks associated with each subtest while the data collector scored each subtest using the responses provided. Project Coordinators used scripted performance with pre-specified errors, hesitations, self-corrects, etc. for each subtest as a key against which data collector scoring could be evaluated. To "pass" the check-outs and be approved to help with data collection, each data collector had to have demonstrated at least 90% agreement with the scripted performance exhibited by the Project Coordinators; if data collectors did not demonstrate at least 90% agreement they were asked to review the training materials again and schedule another check-out with a Project Coordinator. All data collectors met the certification requirements to administer the FB ER-Spanish assessment prior to administering these assessments with students in the schools. The eight data collectors who supported data collection efforts in the Winter *and* the Spring were required to complete a refresher training and a second set of check-outs with the Project Coordinators in the Spring.

IGDIs-Español. As part of this assessment system, the publisher/developers have created online training videos that provide contextual information about the development of the IGDIs Español (including information about why and with which groups of students administering the IGDIs-Español may be appropriate) as well as videos on how to appropriately administer each of the IGDIs-Español subtests using the standardized administration procedures. For each of the five core measures (e.g., *Identificación de los Dibujos; Verbos Expresivos; Identificación de las Letras; Identificación de los Sonidos;* and *Primeros Sonidos*) the online training videos provide the following information: (a) general information about the structure of the subtest, including who is expected to complete which sample items (i.e., test administrator or student); (b) scoring; (c) illustrative examples of what the student and test administrator sees during the subtest; (d) explicit guidelines regarding what text the test administrator is supposed to say during test administration; (e) guidelines for how the test administrator should respond and the type of feedback that should be provided based on the student's responses to *Ejemplos C* and *D*; (f) reminders about the feedback that can be provided and how to proceed if the student does not produce a response; (g) how/when to fade prompts during the subtest administration; and (h) responses to FAQs about the subtest. The training video also provides recommendations for setting up the testing environment, suggested order of subtest administration, guidelines for scoring, and the empirically derived benchmarks that can be used to help identify the level of instructional support students may need to improve their Spanish literacy skills.

For this study, we opted to have core members of our research team responsible for overseeing the training of data collectors (e.g., Project Coordinators, doctoral student) complete these online training videos with the publisher. Following completion of this training, we facilitated our own training with data collectors using the online videos. This format allowed for greater engagement with the data collectors; any questions that data collectors had about the standardized administration procedures and scoring rules that Project Coordinators were unable to answer were passed on to the publisher for clarification. In addition, this format allowed us to have data collectors practice administering and scoring the IGDIs-Español with each other before completing later scheduled check-outs with the Project Coordinators to ensure they could administer the IGDIs-Español subtests with fidelity. This training was approximately 3 hours long. Thirteen data collectors (61.90%) participated in the IGDIs-Español training and all met

the check-out requirements, which included demonstrating knowledge of how to administer each subtest (as evidenced by practicing administering and scoring each subtest with a Project Coordinator during the check-out), understanding the discontinue rules associated with each subtest, and understanding how to enter student responses in the Qualtrics survey form that was created to facilitate easy data collection and scoring.

Analyses

Generalizability of the Sample

To determine the generalizability of the sample, the sample characteristics were compared to the overall demographic characteristics for each participating state. In addition, we report the base rates of risk for students in our sample by grade level, criterion assessment, and threshold for proficiency (i.e., proficiency defined as performing above the 15th percentile or above the 40th percentile).

Classification Accuracy

With respect to the classification accuracy analyses, we present the required indices: (a) base rate of risk of children requiring intervention, (b) sensitivity, (c) specificity, (d) positive predictive power, (e) negative predictive power, (f) accuracy, and (g) Area Under the Curve, as well as (h) specificity when sensitivity is held constant at levels of .70, .80, and .90). We describe each of these analyses conducted for this study in more detail below. All analyses were performed in R (R Core Team, 2016).

As previously noted, reliability estimates were not calculated for this study. These are generated as part of the Computerized Adaptive Testing (CAT) scoring procedures.

Classification accuracy (also known as conditional probability analyses or diagnostic efficiency) refers to the extent to which a universal screening assessment accurately discriminates between categories of students based on their performance on some outcome (or criterion) assessment (Glover & Albers, 2007). Student performance on the *ISIP Español LT* was categorized as "at-risk" and "not at-risk" based on percentile ranks, as determined by Istation. Students who were identified as needing Tier 2 or Tier 3 instructional supports were considered "at-risk" while those identified as needing Tier 1 instructional supports were considered "not at-risk". For this study, classification accuracy of the *ISIP Español LT* administered in Fall, Winter, and Spring was calculated using the IGDIs criterion assessment.

Although we anticipate that the classification accuracy of the *ISIP Español* assessments will vary by season (Fall, Winter, Spring) because students were receiving instruction and should, theoretically, improve, we opted to calculate classification accuracy using *ISIP Español* data from each season because we believe there is value in understanding the extent to which the assessments can accurately discriminate between students who will or will not pass a criterion assessment administered later in the school year. For the criterion assessment available for commercial use, *IGDIs Español*, we conducted two sets of classification accuracy analyses using the following percentiles:

- **15th percentile:** Students who performed at or below the 15th percentile were classified as "did not meet proficiency" while students who performed above the 15th percentile were classified as "met proficiency". These percentiles were derived from normative information provided by the test developer using scale scores.
- **40th percentile:** Students who performed at or below the 40th percentile were classified as "did not meet proficiency" while students who performed above the 40th percentile were classified as "met proficiency". These percentiles were derived from normative information provided by the test developers using scale scores.

For each of these assessments, we calculated the following statistics (described in no particular order of precedence or importance):

- False Positive (FP) rate: The proportion of "met proficiency" students incorrectly identified as students who "did not meet proficiency" (also known as Type 1 error). For example, the proportion of students identified by ISIP Español as students who "did not meet proficiency" who were identified as "met proficiency" on the IGDIs. In other words, an incorrect classification of "did not meet proficiency" with respect to the criterion measure.
- False Negative (FN) rate: The proportion of "did not meet proficiency" students incorrectly identified as students who "met proficiency" (also known as Type II error). For example, the proportion of students identified by ISIP Español as students who "met proficiency" who were identified as students who "did not meet proficiency" on the IGDIs. In other words, an incorrect classification of "met proficiency" with respect to the criterion measure.
- Sensitivity (Sn): The proportion of "did not met proficiency" students correctly identified as students who "did not meet proficiency", also knowns as the True Positive (TP) rate. For example, the proportion of students identified by *ISIP Español* as students who "did not meet proficiency" who were identified as "did not meet proficiency" on the IGDIs. In other words, a correct classification of students who "did not meet proficiency" with respect to the criterion measure.
- Specificity (Sp): The proportion of "met proficiency" students correctly identified as students who "met proficiency", also known as the True Negative (TN) rate. For example, the proportion of students identified by *ISIP Español* as "met proficiency" who were identified as students who "met proficiency" on the IGDIs. In other words, a correct classification of students who "met proficiency" with respect to the criterion measure. In addition to reporting the specificity at the calculated sensitivity rate, we also report specificity when sensitivity is held constant at 0.70, 0.80, and 0.90 for each criterion assessment.
- Positive Predictive Value (PPV): The proportion of students who truly "did not meet proficiency" of all students identified as students who "did not meet proficiency", also known as precision. For example, all of the students identified as students who "did not meet proficiency" on both *ISIP Español* and the IGDIs, the PPV is the proportion of students who are identified as students who "did not meet proficiency" on the IGDIs.
- Negative Predictive Value (NPV): The proportion of students who truly "met proficiency" of all students identified as students who "met proficiency". For example, all of the students identified as students who "met proficiency" on both *ISIP Español* and the

IGDIs, the NPV is the proportion of students who are identified as those who "met proficiency" on the IGDIs.

- Accuracy: The proportion of correctly identified students who "met proficiency" and "did not meet proficiency". For example, the accuracy of *ISIP Español* reflects the proportion of students who were correctly identified as students who "met proficiency" and "did not meet proficiency" with respect to their performance on the criterion measure.
- Area Under the Curve (AUC): The probability that performance on a screening assessment correctly classifies a student as "met proficiency" or "did not meet proficiency" on the criterion assessment. There is variability in the acceptable criteria for convincing evidence for AUC. Kettler et al. (2014) notes that AUC values between .60 and .80 are moderate and values equal to or exceeding .80 are considered high and indicative of strong universal screening assessments.

Validity Evidence

Criterion-related evidence for validity should also be considered when evaluating universal screening assessments because this type of evidence provides an indicator of the extent to which a student's performance on the universal screening assessment is associated with his/her performance on a criterion-referenced assessment, such as a norm-referenced test or state accountability test (Johnson, Jenkins, Petscher, & Catts, 2009). Predictive-related evidence for validity examines the relation between performance on the universal screening assessment and the criterion-referenced assessment when administered at some point in the future (e.g., Fall performance on the universal screening assessment with Spring performance on the criterion-referenced assessment). Concurrent-related evidence for validity examines the relation between performance on the universal screening assessment and the criterion-referenced assessment(s) when administered at the same point in time (e.g., Spring). Kline (2000) proposes that coefficients of approximately $r = .75$ or greater provide strong evidence for concurrent-related validity evidence, correlations of $r = .40 - .50$ serve as moderate evidence for concurrent-related validity evidence, and correlations of $r = .30 - .40$ serve as moderate indicators of evidence for predictive validity.

As part of this study, we collected concurrent- and predictive-related validity evidence for the ISIP Español assessments. Concurrent-related validity evidence for ISIP Español was collected in the Winter with FB ER Spanish and with each of the assessments administered at the Spring – FB ER Spanish, and IGDIs Español. Coefficients were calculated for the overall scale scores (or composite scores) for each assessment, as well as for the subtests. Predictive-related validity evidence for the Fall and Winter administrations of ISIP Español were also collected relative to the two criterion assessments.

Fidelity of Administration and Scoring

In addition to ensuring that data collectors received the training needed to successfully follow the standardized administration procedures required for each test (e.g., FB-ER Spanish, IGDIs Español), we also collected fidelity of assessment administration and scoring data for a set of students in each classroom, grade level, and school. For most assessments, these fidelity checks consisted of (a) using the publisher-provided fidelity checklist to observe administration of the

assessment and (b) shadow-scoring. For shadow-scoring, the "primary" data collector working with a student served as the primary assessor responsible for providing the directions for how to complete the task, modeling tasks for students (as appropriate), and answering any student questions, administering the test, recording student responses, and tracking the administration time (when applicable); at the same time, a veteran data collector or member of the project team served as the "expert" who also tracked the administration time and also scored student responses. Having two assessors score student responses allowed us to calculate inter-rater reliability coefficients as an index of the magnitude of the agreement in scoring between the two assessors.

We present the results of our fidelity of administration and scoring procedures for the FastBridge assessments in Table 5. Specifically, we report the number of students who were assessed at each time point, the number (and percentage) of fidelity checks conducted, the number of instances in which two assessors co-scored a student, and the level of inter-rater reliability for that FastBridge assessment and grade level.

Table 5
Fidelity Results for FastBridge

	N	Checks Conducted	Checks Co-Scored	*r*
FastBridge ER (Winter)	92	7 (7.6%)	3	0.99
FastBridge ER (Spring)	90	9 (10%)	9	0.98

Results and Discussion

Generalizability

For the purposes of this report, generalizability refers to the extent to which the analytic sample for the study was comparable to the population of the participating states and the national population. In Table 6 we present data for our analytic sample compared to the demographic data for Texas (2016-2017), and the nation (2015-2016).

Table 6
Comparison of demographic data for participating sample, states, and United States

Demographic Group	Sample	Texas[a]	United States[b]
Ethnicity			
Hispanic/Latino	93.62%	52.42%	24.90%
Not Hispanic/Latino	3.19%	47.58%	75.10%
Race			
American Indian/Alaskan Native	55.45%	0.40%	1.01%
Asian	-	4.20%	4.99%
Black/African American	-	12.60%	15.46%
Hispanic/Latino	25.74%	52.40%	25.89%

Native Hawaiian/ Pacific Islander	-	0.10%	0.35%
Two or More Races	-	2.20%	3.42%
White	25.74%	28.10%	48.49%
Gender			
Male	43.56%		51.39%
Female	46.53%		48.61%
Special Services			
Free/Reduced Price Lunch	79.20%	59.00%	49.75%
Special Education	3.96%	8.80%	11.61%
Bilingual Program			
English as a Second Language Program	-	18.90%	
Limited English Proficient	90.09%		7.32%

a: Texas Education Agency (2017); b: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (2015-2016)
Note: The TEA reports % of students in bilingual/ESL programs (18.80%), but not LEP

Examination of the demographic data reported in Table 6 indicates what while the sample is comparable to the national and state population with respect to gender, the percentage of students in different racial/ethnic groups and receiving special services varies considerably from the state and national data. With respect to race/ethnicity, the percentage of students who were Hispanic/Latino in our sample were more comparable to the percentages of Hispanic/Latino students in the participating states; the difference from the national percentage is not surprising given our purposeful recruiting of Hispanic/Latino students who spoke Spanish as their native language for participation in this study. Consequently, the significant overrepresentation of students identified as Limited English Proficient in our sample (compared to the state and national percentages) is also not surprising; our sample had approximately 12.8 times as many LEP students (94.23%) as the percentage of students identified as LEP in the United States (7.32%). Although slight differences in the data may be created, in part, by the fact that some entities use the term *English Learner* while others use the term *Limited English Proficient,* data reported by the Texas Education Agency differentiates between students who are identified as LEP versus those who participated in an English as a Second Language (ESL) or Bilingual program.

Additional differences between the sample and the state and national populations include (1) a lower percentage of students in our sample were identified as receiving Special Education services (approximately 1.5 to 2.5 times fewer students), and (b) a greater percentage of students in our sample were identified as receiving Free or Reduced Price Lunch (88.79%) than students in the national sample (49.75%). The overrepresentation of students in our sample receiving Free or Reduced Price Lunch (compared to the state and national samples) is not surprising, given that, on average, more Hispanic/Latino children under the 18 live in poverty compared to students from other demographics subgroups (Krogstad, 2014). Thus, the sample is comparable with the state and national populations for most demographic variables, with the exception of the percentage of Limited English Proficient students or students receiving Free or Reduced Price Lunch.

We present the base rates of risk for participating students by grade level, assessment, and threshold for proficiency in Figure 5.

Figure 5
Base Rates of Risk by Proficiency Threshold

Grade	Assessment	15th Percentile	40th Percentile
PreK	IGDIs Español Denominación de los Dibujos	0.20	0.43
	IGDIs Español Verbos Expresivos	0.20	0.47
	IGDIs Español Denominación de las Letras		
	IGDIs Español Identificación de los Sonidos	0.04	0.13
	IGDIs Español Primeros Sonidos	0.08	0.28

Classification Accuracy

Classification accuracy analyses were performed with the *ISIP Español* assessments to explore the extent to which each *ISIP Español* subtest (and season of administration) was able to accurately differentiate between students who were categorized as "met proficiency" and "did not meet proficiency" using the *IGDIs Español* as the criterion assessments. When reporting the results of these analyses with the *IGDIs Español* as the criterion assessments we present the results of all analyses (using Fall, Winter, and Spring data) with scores above the 15th percentile as our criterion first, followed by presentation of the same results when categorization of "meets proficiency" and "did not meet proficiency" is based on scores above the 40th percentile.

Pre-Kindergarten: Classification Accuracy

We present the results of the classification accuracy analyses for the *ISIP Español LT* (overall and subtest scores) administered in the Fall, Winter, and Spring with respect to performance on the *IGDIs Español* subtests in Tables 7-24, respectively. We present the results of these classification analyses for each available *ISIP Español LT* score (overall scale score and individual subtest scores) with each of the *IGDIs Español* subtest scores using the two cut points for defining risk-status described previously (i.e., performance above the 15th percentile and performance above the 40th percentile). In our interpretation of the results, we focus primarily on the accuracy and diagnostic efficiency of the *ISIP Español LT* overall scale score.

PreKindergarten Proficiency Above the 15th percentile

In this section, we present the results of the classification accuracy for the *ISIP Español LT* administered in the Fall, Winter, and Spring of PreKindergarten for predicting student performance on the *IGDIs Español* subtests whereby students whose scores were above the 15th percentile were categorized as "meets proficiency" and those whose scores were at or below the 15th percentile were categorized as "did not meet proficiency".

*Classification accuracy using **Fall** ISIP Español LT scores.* In the paragraphs that follow, we present the results of the classification accuracy analyses conducted using Fall ISIP Español LT scores to predict performance on the IGDIs Español subtests in the Spring.

Table 7
*Classification accuracy of **Fall** ISIP Español LT for IGDIs Español subtests, with passing scores above the **15th** percentile (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC[a]
Denominación de los Dibujos	0.63	0.50	0.40	0.38	0.29	0.86	0.60	0.62 (0.47, 0.75)
Verbos Expresivos	0.65	0.61	0.39	0.35	0.31	0.86	0.62	0.63 (0.49, 0.76)
Denominación de las Letras	0.00	0.55	0.46	1.00	0.00	0.98	0.54	0.27 (NA)
Identificación de los Sonidos	0.50	0.55	0.45	0.50	0.06	0.95	0.55	0.53 (0.24, 0.82)
Primeros Sonidos	0.43	0.55	0.45	0.57	0.09	0.91	0.54	0.49 (0.28, 0.70)

[a] The upper and lower bounds of the 95% confidence interval associated with the AUC estimate are reported in parentheses

Table 8
*Classification accuracy of **Fall** ISIP Español LT Destreza fonológica y fonética for IGDIs Español subtests, with passing scores above the **15th** percentile (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.63	0.55	0.45	0.38	0.26	0.85	0.56	0.59 (0.45, 0.72)
Verbos Expresivos	0.65	0.56	0.44	0.35	0.29	0.85	0.58	0.61 (0.47, 0.74)
Identificación de las Letras	0.00	0.51	0.49	1.00	0.00	0.98	0.50	0.25 (NA)
Denominación de los Sonidos	0.50	0.51	0.49	0.50	0.05	0.95	0.51	0.51 (0.22, 0.80)
Primeros Sonidos	0.57	0.52	0.48	0.43	0.11	0.93	0.53	0.55 (0.34, 0.75)

Table 9

*Classification accuracy of **Fall** ISIP Español LT Vocabulario for IGDIs Español subtests, with passing scores above the 15th percentile (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.65	0.66	0.34	0.44	0.30	0.85	0.64	0.61 (0.47, 0.75)
Verbos Expresivos	0.47	00.64	0.36	0.53	0.27	0.81	0.60	0.56 (0.42, 0.69)
Identificación de las Letras	1.00	0.62	0.38	0.00	0.03	1.00	0.63	0.81 (NA)
Denominación de los Sonidos	0.25	0.61	0.39	0.75	0.03	0.94	0.59	0.43 (0.18, 0.68)
Primeros Sonidos	0.43	0.62	0.38	0.57	0.10	0.92	0.60	0.52 (0.32, 0.73)

Table 10

*Classification accuracy of **Fall** ISIP Español LT Comprensión Auditiva scale score on IGDIs Español subtests, with passing scores above the 15th percentile (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.69	0.68	0.32	0.31	0.36	0.89	0.68	0.68 (0.55, 0.81)
Verbos Expresivos	0.65	0.67	0.33	0.35	0.67	0.66	0.36	0.87 (0.53, 0.79)
Identificación de las Letras	1.00	0.61	0.39	0.00	0.03	1.00	0.62	0.81 (NA)
Denominación de los Sonidos	0.75	0.62	0.38	0.25	0.10	0.98	0.63	0.69 (0.44, 0.94)
Primeros Sonidos	0.57	0.6	0.38	0.43	0.03	1.00	0.62	0.60 (0.39, 0.80)

Data from Table 7 reveals that the sensitivity of the Fall *ISIP Español LT* ranged from of .00 for the *Identificación de las Letras* subtest to .65 for the *Verbos Expresivos* subtest. These data indicate, in other words, that between 0% and 65% of PreKindergarten students who were classified as "at-risk" on the Fall *ISIP Español LT* were also classified as "did not meet proficiency" by one of the *IGDIs Español* subtests

The specificity values for Fall *ISIP Español LT*, although slightly lower, were also significantly less variable, as they ranged from .50 for the *Identificación de los Dibujos* subtest to .61 for the *Verbos Expresivos* subtest. In other words, between 50% and 61% of the student who were classified as "met proficiency" on the *IGDIs Español* were also classified as "met proficiency" by *ISIP Español LT* when administered in the Fall of PreKindergarten. This also indicates that between 39% - 50% of students were classified as "did not meet proficiency" on the *ISIP Español LT* in the Fall of PreKindergarten who were classified as "did not meet proficiency" by the *IGDIs Español.*

We also report the specificity of the level of risk associated with the Fall *ISIP Español LT* Overall scale score when the sensitivity is held at one of three fixed rates: .70, .80, and .90. We present these results in Table 11.

Table 11

*Specificity of **Fall** ISIP Español LT overall scale score for predicting meeting proficiency (above the **15th** percentile) on IGDIs Español subtests when sensitivity values are fixed (n = 90)*

Subtest	.70	.80	.90
Denominación de los Dibujos	0.48	0.32	0.16
Verbos Expresivos	0.52	0.34	0.17
Identificación de las Letras	0.16	0.11	0.06
Denominación de los Sonidos	0.33	0.22	0.11
Primeros Sonidos	0.72	0.19	0.10

These data indicate that when the sensitivity for the Fall *ISIP Español LT* overall scale score is held constant at .70 (such that 70% of the students identified as "did not meet proficiency" on *ISIP Español LT* are identified as "did not meet proficiency" on an IGDIs subtest) the specificity associated with the IGDIs subtests ranges from .16 (*Denominación de los Dibujos*) to .72 (*Primeros Sonidos*). In other words, these data indicate when 70% of students are classified as "did not meet proficiency" on the Fall *ISIP Español LT* using the overall scale score, the percentage of students who were correctly classified as "met proficiency" on the *IGDIs Español* ranged from 16% to 72%, depending on the *IGDIs Español* subtest. Closer examination of the values reported in Table 12 indicates that, on average, as the fixed sensitivity value for *ISIP Español LT* overall scale score in the Fall increases (and subsequently, more students are identified as "meets proficiency"), the specificity values for each *IGDIs Español* subtest decreases (in some cases quite dramatically).

The PPV, or precision of classification, for the Fall *ISIP Español LT* overall scale score was relatively low, ranging from .00 to .31, depending on the *IGDIs Español* subtest. This indicates that between 0% - 31% of the students who were truly students who "did not meet proficiency" were classified as "did not meet proficiency" by the Fall *ISIP Español LT* overall scale score and the *IGDIs Español*. The NPV ranged .86 - .91, indicating that 86% - 91% of the students who were truly those who "met proficiency" were classified as students who "met proficiency" by the Fall *ISIP Español LT* overall scale score and the *IGDIs Español*.

The accuracy of identification using the Fall *ISIP Español LT* overall scale score ranged from .54 - .62, indicating that the percent of students correctly classified on the Fall *ISIP Español* LT with respect to *IGDIs Español* performance was between 54% and 62% for PreKindergarten. The AUC indices ranged from .27 - .63. Using the guidelines suggested by Kettler et al. (2014), the AUC indices are low to moderate.

Of the five *IGDIs Español* subtests, the classification accuracy indices appear most robust for the *Verbos Expresivos* subtest, as the Fall *ISIP Español LT* overall scale score demonstrated the largest sensitivity and specificity values, lowest FPR and FNR, and greatest accuracy and AUC indices with this *IGDIs Español* subtest.

*Classification accuracy using **Winter** ISIP Español LT scores.* In the paragraphs that follow, we present the results of the classification accuracy analyses conducted using Winter *ISIP Español LT* scores to predict performance on the *IGDIs Español* subtests in the Spring.

Table 12
*Classification accuracy of **Winter** ISIP Español LT level of risk for IGDIs Español subtests, with passing scores above the **15th percentile** (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC[a]
Denominación de los Dibujos	0.77	0.67	0.33	0.24	0.35	0.92	0.69	0.72 (0.60, 0.83)
Verbos Expresivos	0.56	0.62	0.38	0.44	0.27	0.85	0.61	0.59 (0.46, 0.72)
Denominación de las Letras	1.00	0.59	0.41	0.00	0.03	1.00	0.60	0.80 (NA)
Identificación de los Sonidos	0.25	0.58	0.42	0.75	0.03	0.95	0.56	0.41 (0.16, 0.66)
Primeros Sonidos	0.71	0.61	0.87	0.04	0.14	0.96	0.66	0.66 (0.47, 0.85)

Table 13
*Classification accuracy of **Winter** ISIP Español LT Destreza fonológica y fonética scale score on IGDIs Español subtests, with passing scores above the **15th percentile** (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.71	0.61	0.39	0.29	0.30	0.90	0.63	0.66 (0.53, 0.78)
Verbos Expresivos	0.61	0.59	0.41	0.39	0.28	0.86	0.60	0.60 (0.47, 0.73)
Denominación de las Letras	0.00	0.55	0.46	1.00	0.00	0.98	0.54	0.27 (NA)
Identificación de los Sonidos	0.75	0.57	0.44	0.25	0.08	0.98	0.57	0.66 (0.41, 0.91)
Primeros Sonidos	0.57	0.56	0.44	0.43	0.10	0.94	0.56	0.57 (0.36, 0.77)

Table 14
*Classification accuracy of **Winter** ISIP Español LT Vocabulario scale score on IGDIs Español subtests, with passing scores above the **15th percentile** (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.53	0.72	0.28	0.47	0.31	0.87	0.69	0.63 (0.49, 0.76)
Verbos Expresivos	0.44	0.70	0.30	0.56	0.28	0.83	0.65	0.57 (0.45, 0.70)
Denominación de las Letras	1.00	0.68	0.32	0.00	0.03	1.00	0.69	0.85 (NA)
Identificación de los Sonidos	0.00	0.66	0.34	1.00	0.00	0.93	0.63	0.33 (0.28, 0.38)
Primeros Sonidos	0.57	0.70	0.31	0.43	0.14	0.95	0.69	0.63 (0.43, 0.84)

Table 15
*Classification accuracy of **Winter** ISIP Español LT Comprensión Auditiva scale score on IGDIs subtests, with passing scores above the **15th percentile** (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.71	0.43	0.57	0.29	0.23	0.86	0.48	0.57 (0.44, 0.69)
Verbos Expresivos	0.78	0.45	0.55	0.22	0.26	0.89	0.52	0.61 (0.50, 0.73)
Denominación de las Letras	1.00	0.41	0.59	0.00	0.02	1.00	0.42	0.71 (NA)
Identificación de los Sonidos	1.00	0.42	0.58	0.00	0.08	1.00	0.45	0.71 (0.66, 0.78)
Primeros Sonidos	0.57	0.40	0.60	0.43	0.08	0.92	0.42	0.49 (0.28, 0.69)

Data from Table 12 reveals that the sensitivity of the Winter *ISIP Español LT* Overall scale score ranged from of 0.25 for the *Identificación de los Sonidos* subtest to 1.00 for the *Denominación de las Letras* subtest. These data indicate, in other words, that between 25% and 100% of PreKindergarten students who were classified as "did not meet proficiency" on the Winter *ISIP Español LT* were also classified as "did not meet proficiency" by one of the IGDIs subtests

The specificity values for Winter *ISIP Español LT*, although slightly lower, were also significantly less variable, as they ranged from .58 for the *Identificación de los Sonidos* subtest to .67 for the *Denominación de los Dibujos* subtest. In other words, between 58% and 67% of the student who were classified as "met proficiency" on the *IGDIs Español* were also classified as "meets proficiency" by *ISIP Español LT* when administered in the Winter of PreKindergarten. This also indicates that between 33% - 42% of students were classified as "did not meet proficiency" on the *ISIP Español LT* in the Winter of PreKindergarten who were classified as "meets proficiency" by the *IGDIs Español.*

We also report the specificity of the Winter ISIP Español LT Overall scale score when the sensitivity is held at one of three fixed rates: .70, .80, and .90. We present these results in Table 16.

Table 16
*Specificity of **Winter** ISIP Español LT overall scale score for predicting meeting proficiency (above the 15th percentile) on IGDIs Español subtests when sensitivity values are fixed (n = 90)*

Subtest	.70	.80	.90
Denominación de los Dibujos	0.70	0.57	0.28
Verbos Expresivos	0.42	0.28	0.14
Denominación de las Letras	0.71	0.67	0.63
Identificación de los Sonidos	0.23	0.15	0.08
Primeros Sonidos	0.62	0.43	0.21

These data indicate that when the sensitivity for the Winter *ISIP Español LT* overall scale score is held constant at .70 (such that 70% of the students identified as "did not meet proficiency" on *ISIP Español LT* are identified as "did not meet proficiency" on an *IGDIs Español* subtest) the specificity associated with the IGDIs subtests ranges from .23 (*Identificación de los Sonidos*) to .71 (*Denominación de las Letras*). In other words, these data indicate when 70% of students are

classified as "did not meet proficiency" on the Winter *ISIP Español LT* using the overall scale score, the percentage of students who were correctly classified as "met proficiency" on the *IGDIs Español* ranged from 23% to 71%, depending on the *IGDIs Español* subtest. Closer examination of the values reported in Table 17 indicates that, on average, as the fixed sensitivity value for *ISIP Español LT* overall scale score in the Winter increases (and subsequently, more students are identified as "meets proficiency"), the specificity values for each *IGDIs Español* subtest decreases (in some cases quite dramatically).

The PPV, or precision of classification, for the Winter *ISIP Español LT* overall scale score was relatively low, ranging from .03 to .35, depending on the *IGDIs Español* subtest. This indicates that between 3% - 35% of the students who were truly students who "did not meet proficiency" were classified as "did not meet proficiency" by the Winter *ISIP Español LT* overall scale score and the *IGDIs Español*. The NPV ranged .85 – 1.00, indicating that 85% - 100% of the students who were truly those who "met proficiency" were classified as students who "did not met proficiency" by the Winter *ISIP Español LT* overall scale score and an *IGDIs Español* subtest.

The accuracy of identification using the Winter *ISIP Español LT* overall scale score ranged from .56 - .69, indicating that the percent of students correctly classified on the Winter *ISIP Español* LT with respect to *IGDIs Español* performance was between 56% and 69% for PreKindergarten. The AUC indices ranged from .56 - .69. Using the guidelines suggested by Kettler et al. (2014), the AUC indices are low to moderate.

For the five *IGDIs Español* subtests, the classification accuracy indices for the Winter *ISIP Español LT* overall scale score were not as consistent as those observed in the Fall. The sensitivity value was greatest, for example, for the *Identificación de las Letras* subtest at 1.00, indicating that 100% of the students who were identified as "did not meet proficiency" using the Winter *ISIP Español LT* overall scale score were also identified as "did not meet proficiency based on their performance on the *Denominación de las Letras* subtest of the *IGDIs Español*. In contrast, specificity was the greatest for the *Denominación de los Dibujos* subtest at .67, indicating that 67% of the students who were identified as those who "met proficiency" using the Winter *ISIP Español LT* overall scale score were also identified as those who "met proficiency" using the *Denominación de los Dibujos* subtest of the *IGDIs Español*. Also unlike the Fall, there was not one *IGDIs Español* subtest for which the FPR and FNR rates were consistently the lowest; using the Winter *ISIP Español LT* overall score, the FPR and FNR rates were lowest for the *Identificación de los Dibujos* and *Identificación de las Letras IGDIs Español* subtests at 0.33 and 1.00, respectively. Finally, the largest accuracy and AUC values were also not observed for the Winter *ISIP Español LT* overall scale score predicting performance on a specific *IGDIs Español* subtest; rather, the largest accuracy value was observed for the *Denominación de los Dibujos* subtest (.69) while the largest AUC value of .80 was observed for the *Denominación de las Letras* subtest, indicating that the Winter *ISIP Español LT* was able to accurately predict passing status on the *Identificación de las Letras* subtest for 80% of PreKindergarten students.

*Classification accuracy using **Spring** ISIP Español LT scores.* In the paragraphs that follow, we present the results of the classification accuracy analyses conducted using Winter *ISIP Español LT* scores to predict performance on the *IGDIs Español* subtests in the Spring.

Table 17

*Classification accuracy of **Spring** ISIP Español LT overall scale score on IGDIs Español subtests, with passing scores above the **15th percentile** (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC[a]
Denominación de los Dibujos	0.53	0.71	0.29	0.47	0.30	0.86	0.67	0.62 (0.49, 0.75)
Verbos Expresivos	0.39	0.68	0.32	0.61	0.23	0.81	0.62	0.53 (0.40, 0.66)
Denominación de las Letras	1.00	0.67	0.33	0.00	0.03	1.00	0.67	0.85 (NA)
Identificación de los Sonidos	0.50	0.67	0.33	0.50	0.07	0.97	0.66	0.59 (0.30, 0.87)
Primeros Sonidos	0.29	0.67	0.34	0.71	0.07	0.92	0.63	0.47 (0.28, 0.66)

Table 18

*Classification accuracy of **Spring** ISIP Español LT Destreza fonológica y fonética scale score on IGDIs Español subtests, with passing scores above the **15th percentile** (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.47	0.76	0.24	0.53	0.32	0.86	0.71	0.62 (0.49, 0.75)
Verbos Expresivos	0.39	0.75	0.25	0.61	0.28	0.83	0.67	0.57 (0.44, 0.69)
Denominación de las Letras	0.00	0.72	0.28	1.00	0.00	0.98	0.71	0.36 (NA)
Identificación de los Sonidos	0.50	0.73	0.27	0.50	0.08	0.97	0.71	0.62 (0.33, 0.90)
Primeros Sonidos	0.29	0.72	0.28	0.71	0.08	0.92	0.69	0.50 (0.32, 0.69)

Table 19

*Classification accuracy of **Spring** ISIP Español LT Vocabulario scale score on IGDIs Español subtests, with passing scores above the **15th percentile** (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.41	0.67	0.33	0.59	0.23	0.83	0.62	0.54 (0.41, 0.67)
Verbos Expresivos	0.39	0.66	0.34	0.61	0.23	0.81	0.61	0.53 (0.40), 0.65)
Denominación de las Letras	1.00	0.66	0.34	0.00	0.03	1.00	0.66	0.83 (NA)
Identificación de los Sonidos	0.50	0.66	0.34	0.50	0.07	0.97	0.65	0.58 (0.29, 0.87)
Primeros Sonidos	0.57	0.67	0.33	0.43	0.13	0.95	0.66	0.62 (0.42, 0.83)

Table 20

*Classification accuracy of **Spring** ISIP Español LT Comprensión Auditiva scale score on IGDIs subtests, with passing scores above the **15th percentile** (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.71	0.56	0.44	0.29	0.27	0.89	0.58	0.63 (0.51, 0.76)

Subtest								
Verbos Expresivos	0.72	0.56	0.49	0.43	0.30	0.89	0.60	0.64 (0.52, 0.76)
Denominación de las Letras	1.00	0.51	0.49	0.00	0.02	1.00	0.52	0.76 (NA)
Identificación de los Sonidos	0.75	0.52	0.48	0.25	0.07	0.98	0.53	0.63 (0.38, 0.89)
Primeros Sonidos	0.57	0.51	0.49	0.43	0.09	0.93	0.52	0.54 (0.38, 0.75)

Data from Table 17 reveals that the sensitivity of the Spring *ISIP Español LT* Overall scale score ranged from .29 for the *Primeros Sonidos* subtest to 1.00 for the *Denominación de las Letras* subtest. These data indicate, in other words, that between 29% and 100% of PreKindergarten students who were classified as "did not meet proficiency" on the Spring *ISIP Español LT* were also classified as "did not meet" by one of the *IGDIs Español* subtests.

The specificity values for Spring *ISIP Español LT*, were significantly less variable, as they ranged from .67 for the *Identificación de las Letras* subtest to .71 for the *Denominación de los Dibujos* subtest. In other words, between 67% and 71% of the student who were classified as "meets proficiency" on the *IGDIs Español* were also classified as "meets proficiency" by *ISIP Español LT* when administered in the Spring of PreKindergarten. This also indicates that between 29% - 33% of students who were classified as "did not meet proficiency" on the *ISIP Español LT* in the Spring of PreKindergarten were classified as "met proficiency" by the *IGDIs Español.*

We also report the specificity of the Spring ISIP Español LT Overall scale score when the sensitivity is held at one of three fixed rates: .70, .80, and .90. We present these results in Table 21.

Table 21
*Specificity of **Spring** ISIP Español LT overall scale score for predicting meeting proficiency (above the 15th percentile on IGDIs Español subtests when sensitivity values are fixed (n = 90)*

Subtest	.70	.80	.90
Denominación de los Dibujos	0.45	0.30	0.15
Verbos Expresivos	0.33	0.22	0.11
Denominación de las Letras	0.77	0.74	0.70
Identificación de los Sonidos	0.40	0.27	0.13
Primeros Sonidos	0.28	0.18	0.09

These data indicate that when the sensitivity for the Spring *ISIP Español LT* overall scale score is held constant at .70 (such that 70% of the students identified as "did not meet proficiency" on *ISIP Español LT* are identified as "did not meet proficiency" on an *IGDIs Español* subtest) the specificity associated with the IGDIs subtests ranges from .28 (*Primeros Sonidos*) to .77 (*Denominación de las Letras*). In other words, these data indicate when 70% of students are classified as "did not meet proficiency" on the Spring *ISIP Español LT* using the overall scale score, the percentage of students who were correctly classified as "met proficiency" on the *IGDIs Español* ranged from 28% to 77%, depending on the *IGDIs Español* subtest. Closer

examination of the values reported in Table 22 indicates that, on average, as the fixed sensitivity value for *ISIP Español LT* overall scale score in the Spring increases (and subsequently, more students are identified as "meets proficiency"), the specificity values for each *IGDIs Español* subtest decreases (in some cases quite dramatically). Interestingly, the specificity values remain relatively high and constant for the *Identficación de las Letras* subtest across the different fixed sensitivity values (specificity ranging from .70 – .77 as sensitivity varies from .70 – .90); this is the only *IGDIs Español* subtest for which the Spring *ISIP Español LT* overall scale score even distantly approaches the ideal sensitivity and specificity values of 1.00 recommended for a strong universal screening assessment.

The PPV, or precision of classification, for the Spring *ISIP Español LT* overall scale score was relatively low, ranging from .03 to .30, depending on the *IGDIs Español* subtest. This indicates that between 3% - 30% of the students who were truly students who "did not meet proficiency" were classified as "did not meet proficiency" by the Spring *ISIP Español LT* overall scale score and the *IGDIs Español*. The NPV ranged .81 – 1.00, indicating that 81% - 100% of the students who were truly those who "met proficiency" were classified as students who "met proficiency" by the Spring *ISIP Español LT* overall scale score and an *IGDIs Español* subtest.

The accuracy of identification using the Spring *ISIP Español LT* overall scale score ranged from .62 - .67, indicating that the percent of students correctly classified by the Spring *ISIP Español* LT overall scale score with respect to *IGDIs Español* performance was between 62% and 67% for PreKindergarten. The AUC indices ranged from .47 - .85. Using the guidelines suggested by Kettler et al. (2014), the AUC indices are low to moderate for all but the *Denominación de las Letras* subtest, for which the AUC value is considered high.

For the five *IGDIs Español* subtests, the classification accuracy indices for the Spring *ISIP Español LT* overall scale score were not as consistent as those observed in the Fall, although the results appear to be slightly more consistent than Winter. The sensitivity value was the highest for the *Denominación de las Letras* subtest (1.00), indicating that 100% of students who were identified as "did not meet proficiency" using the Spring *ISIP Español LT* overall scale score were also identified as "did not meet proficiency" based on their performance on the *Identificación de las Letras* subtest of the *IGDIs Español.* The specificity value for the *Identificación de las Letras* subtest was also among the highest, although specificity was the greatest for the *Verbos Expresivos* subtest at .68, indicating that 68% of students who were identified as "met proficiency" using the Spring *ISIP Español LT* overall scale score were also identified as "met proficiency" on the *Verbos Expresivos* subtest. False Positive and False Negative rates were also the lowest for the *Denominación de las Letras* subtest at 0.33 and 0.00, respectively, indicating that the Spring *ISIP Español LT* overall scale score exhibited the smallest proportion of incorrectly identified students for this *IGDIs Español* subtest. The largest accuracy values (0.67) for the *Denominación de los Dibujos* and *Denominación de las Letras* subtests, indicating that the Spring *ISIP Español LT* overall scale score correctly identified 67% of the students who "met proficiency" and "did not meet proficiency" on these *IGDIs Español* subtests. Similar to the Winter, the AUC for the Spring *ISIP Español LT* overall scale score predicting performance on the *IGDIs Español Denominación de las Letras* subtest was the largest (0.85).

In this section, we present the results of the classification accuracy for the *ISIP Español LT* administered in the Fall, Winter, and Spring of PreKindergarten for predicting student performance on the *IGDIs Español* subtests whereby students whose scores were above the 40th percentile or above were categorized as "met proficiency" and those whose scores were at or below the 40th percentile were categorized as "did not meet proficiency".

Classification accuracy using Fall ISIP Español LT scores. In the paragraphs that follow, we present the results of the classification accuracy analyses conducted using Fall *ISIP Español LT* scores to predict performance on the *IGDIs Español* subtests in the Spring.

Table 22
*Classification accuracy of **Fall** ISIP Español LT overall scale score on IGDIs Español subtests, with passing scores above the **40th percentile** (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC[a]
Denominación de los Dibujos	0.61	0.69	0.31	0.39	0.63	0.67	0.65	0.65 (0.53, 0.36)
Verbos Expresivos	0.57	0.66	0.34	0.43	0.60	0.63	0.62	0.61 (0.50, 0.72)
Denominación de las Letras	0.50	0.55	0.45	0.50	0.03	0.98	0.55	0.53 (0.03, 1.00)
Identificación de los Sonidos	0.73	0.60	0.40	0.27	0.23	0.93	0.62	0.66 (0.51, 0.81)
Primeros Sonidos	0.53	0.58	0.42	0.47	0.29	0.79	0.55	0.42 (0.42, 0.68)

Table 23
*Classification accuracy of **Fall** ISIP Español LT Destreza fonológica y fonética scale score on IGDIs Español subtests, with passing scores above the **40th percentile** (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.58	0.60	0.41	0.42	0.55	0.63	0.59	0.59 (0.48, 0.70)
Verbos Expresivos	0.54	0.46	0.44	0.46	0.53	0.58	0.55	0.55 (0.44, 0.66)
Denominación de las Letras	0.50	0.51	0.49	0.50	0.03	0.98	0.51	0.51 (0.51, 0.76)
Identificación de los Sonidos	0.64	0.54	0.46	0.36	0.18	0.90	0.55	0.59 (0.43, 0.75)
Primeros Sonidos	0.68	0.51	0.49	0.50	0.03	0.98	0.51	0.51 (0.51, 0.76)

Table 24
*Classification accuracy of **Fall** ISIP Español LT Vocabulario scale score on IGDIs Español subtests, with passing scores above the **40th percentile** (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.47	0.69	0.31	0.53	0.57	0.60	0.59	0.58 (0.47, 0.69)
Verbos Expresivos	0.46	0.68	0.32	0.54	0.57	0.58	0.58	0.57

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
								(0.46, 0.68)
Denominación de las Letras	0.50	0.62	0.38	0.50	0.03	0.98	0.62	0.56 (0.07, 1.00)
Identificación de los Sonidos	0.46	0.63	0.37	0.55	0.17	0.88	0.60	0.54 (0.38, 0.71)
Primeros Sonidos	0.37	0.61	0.39	0.63	0.23	0.75	0.55	0.49 (0.36, 0.62)

Table 25

*Classification accuracy of **Fall** ISIP Español LT Comprensión Auditiva scale score on IGDIs Español subtests, with passing scores above the **40th percentile** (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.56	0.74	0.26	0.44	0.65	0.66	0.65	0.65 (0.54, 0.75)
Verbos Expresivos	0.54	0.73	0.27	0.46	0.65	0.64	0.64	0.64 (0.53, 0.74)
Denominación de las Letras	1.00	0.62	0.38	0.00	0.07	1.00	0.63	0.81 (0.75, 0.86)
Identificación de los Sonidos	0.64	0.64	0.36	0.36	0.23	0.92	0.64	0.64 (0.48, 0.80)
Primeros Sonidos	0.63	0.68	0.32	0.37	0.39	0.85	0.67	0.66 (0.53, 0.78)

Data from Table 22 reveals that the sensitivity of the Fall *ISIP Español LT* Overall scale score ranged from of .50 for the *Denominación de las Letras* subtest to .73 for the *Identificación de los Sonidos* subtest. These data indicate, in other words, that between 50% and 73% of PreKindergarten students who were classified as "did not meet proficiency" on the Fall *ISIP Español LT* were also classified as "did not meet proficiency" by one of the IGDIs subtests when proficiency was defined as performing above the 40th percentile.

The specificity values for Fall *ISIP Español LT* were comparable, ranging from .55 for the *Denominación de las Letras* IGDIs subtest to .69 for the *Denominación de los Dibujos* subtest. In other words, between 55% and 69% of the students who were classified as "met proficiency" on the IGDIs were also classified as "met proficiency" by *ISIP Español LT* when administered in the Fall of PreKindergarten. This also indicates that between 31% - 45% of students were classified as "did not meet proficiency" on the *ISIP Español LT* in the Fall of PreKindergarten who were classified as "did not meet proficiency" by the *IGDIs Español*.

We also report the specificity of the Fall *ISIP Español LT* Overall scale score when the sensitivity is held at one of three fixed rates: .70, .80, and .90. We present these results in Table 26.

Table 26

*Specificity of **Fall** ISIP Español LT overall scale score for predicting meeting proficiency (above the 40th percentile) on IGDIs Español subtests when sensitivity values are fixed (n = 90)*

Subtest	.70	.80	.90
Denominación de los Dibujos	0.53	0.36	0.18
Verbos Expresivos	0.46	0.31	0.15

Denominación de las Letras	0.33	0.22	0.11
Identificación de los Sonidos	0.61	0.44	0.22
Primeros Sonidos	0.36	0.22	0.11

These data indicate that when the sensitivity for the Fall *ISIP Español LT* overall scale score is held constant at .70 (such that 70% of the students identified as "met proficiency" on *ISIP Español LT* are identified as "met proficiency" on an *IGDIs Español* subtest) the specificity associated with the IGDIs subtests ranges from .33 (*Denominación de las Letras*) to .61 (*Identificación de los Sonidos*). In other words, these data indicate when 70% of students are classified as "met proficiency" on the Fall *ISIP Español LT* using the overall scale score, the percentage of students who were correctly classified as "did not meet proficiency" on the *IGDIs Español* ranged from 33% to 61%, depending on the *IGDIs Español* subtest. Closer examination of the values reported in Table 27 indicates that, on average, as the fixed sensitivity value for *ISIP Español LT* overall scale score in the Fall increases (and subsequently, more students are identified as "meets proficiency"), the specificity values for each *IGDIs Español* subtest decreases (in some cases quite dramatically).

The PPV, or precision of classification, for the Fall *ISIP Español LT* overall scale score was relatively low, ranging from .03 to .63, depending on the *IGDIs Español* subtest. This indicates that between 3% - 63% of the students who were truly students who "did not meet proficiency" were classified as "did not meet proficiency" by the Fall *ISIP Español LT* overall scale score and the *IGDIs Español* when the threshold for passing was set above the 40th percentile. The NPV ranged .63 – .98, indicating that 63% - 98% of the students who were truly those who "did not meet proficiency" were classified as students who "did not meet proficiency" by the Fall *ISIP Español LT* overall scale score and an *IGDIs Español* subtest.

The accuracy of identification using the Fall *ISIP Español LT* overall scale score ranged from .55 - .66, indicating that the percent of students correctly classified by the Fall *ISIP Español* LT with respect to *IGDIs Español* performance when proficiency was identified as performing at the 40th percentile and above was between 55% and 66% for PreKindergarten. The AUC indices ranged from .42 - .66. Using the guidelines suggested by Kettler et al. (2014), the AUC indices are low to moderate.

For the five *IGDIs Español* subtests with proficiency defined as performing above the 40th percentile, the classification accuracy indices for the Fall *ISIP Español LT* overall scale score varied slightly from the results of analyses when the threshold for proficiency was set above the 15th percentile. The sensitivity value was greatest, for example, for the *Identificación de los Sonidos* subtest at .73, indicating that 73% of the students who were identified as "did not meet proficiency" based on their Fall *ISIP Español LT* overall scale score were also identified as "did not meet proficiency" based on their performance on the *Identificación de los Sonidos* subtest of the *IGDIs Español.* Specificity was the greatest, however, for the *Denominación de los Dibujos* subtest at .69, indicating that 69% of the students who were identified as those who "met proficiency" using the Fall *ISIP Español LT* overall scale score were also identified as those who "met proficiency" using the *Denominación de los Dibujos* subtest of the *IGDIs Español*. Accuracy was also the greatest for the *Denominación de los Dibujos* subtest at .65, indicating that 65% of PreKindergarten students were correctly identified as "met proficiency" and "did not

meet proficiency". Finally, the AUC value was greatest for the *Identificación de los Sonidos* subtest at .66, indicating that the Fall *ISIP Español LT* was able to accurately predict passing status on the *Identificación de los Sonidos* subtest for 66% of PreKindergarten students.

*Classification accuracy using **Winter** ISIP Español LT scores.* In the paragraphs that follow, we present the results of the classification accuracy analyses conducted using Winter *ISIP Español LT* scores to predict performance on the *IGDIs Español* subtests in the Spring.

Table 27
*Classification accuracy of **Winter** ISIP Español LT overall scale score on IGDIs Español subtests, with passing scores above the **40th** percentile (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC[a]
Denominación de los Dibujos	0.66	0.77	0.24	0.34	0.68	0.75	0.72	0.71 (0.62, 0.81)
Verbos Expresivos	0.49	0.65	0.35	0.51	0.54	0.60	0.57	0.57 (0.46, 0.67)
Denominación de las Letras	1.00	0.60	0.40	0.00	0.05	1.00	0.61	0.80 (0.75, 0.85)
Identificación de los Sonidos	0.73	0.63	0.37	0.27	0.22	0.94	0.64	0.68 (0.53, 0.83)
Primeros Sonidos	0.56	0.64	0.36	0.44	0.38	0.79	0.62	0.60 (0.49, 0.72)

Table 28
*Classification accuracy of **Winter** ISIP Español LT Destreza fonológica y foneética scale score on IGDIs Español subtests, with passing scores above the **40th** percentile (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.58	0.65	0.35	0.42	0.55	0.67	0.62	0.61 (0.51, 0.72)
Verbos Expresivos	0.49	0.58	0.42	0.51	0.50	0.57	0.54	0.54 (0.43, 0.64)
Denominación de las Letras	0.50	0.55	0.45	0.50	0.03	0.98	0.55	0.53 (0.03, 1.00)
Identificación de los Sonidos	0.73	0.59	0.41	0.27	0.20	0.94	0.61	0.66 (0.51, 0.81)
Primeros Sonidos	0.40	0.53	0.47	0.60	0.25	0.69	0.49	0.47 (0.35, 0.58)

Table 29
*Classification accuracy of **Winter** ISIP Español LT Vocabulario scale score on IGDIs Español subtests, with passing scores above the **40th** percentile*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.50	0.80	0.20	0.50	0.66	0.68	0.67	0.65 (0.55, 0.75)
Verbos Expresivos	0.39	0.73	0.27	0.61	0.55	0.58	0.57	0.56 (0.46, 0.66)
Denominación de las Letras	1.00	0.69	0.31	0.00	0.07	1.00	0.70	0.85 (0.80, 0.89)
Identificación de los Sonidos	0.46	0.69	0.31	0.55	0.17	0.90	0.66	0.57 (0.41, 0.74)

| Primeros Sonidos | 0.28 | 0.67 | 0.34 | 0.72 | 0.24 | 0.70 | 0.55 | 0.47 (0.36, 0.58) |

Table 30
*Classification accuracy of **Winter** ISIP Español LT Comprensión Auditiva scale score on IGDIs Español subtests, with passing scores above the **40th percentile** (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.68	0.47	0.53	0.32	0.49	0.67	0.56	0.58 (0.76, 0.68)
Verbos Expresivos	0.73	0.52	0.48	0.27	0.57	0.69	0.62	0.63 (0.53, 0.73)
Denominación de las Letras	1.00	0.41	0.59	0.00	0.04	1.00	0.43	0.71 (0.67, 0.78)
Identificación de los Sonidos	0.82	0.44	0.56	0.18	0.17	0.94	0.48	0.63 (0.50, 0.76)
Primeros Sonidos	0.56	0.39	0.61	0.44	0.26	0.69	0.44	0.48 (0.36, 0.59)

Data from Table 27 reveals that the sensitivity of the Winter *ISIP Español LT* Overall scale score ranged from of .49 for the *Verbos Expresivos* subtest to 1.00 for the *Identificación de las Letras* subtest. These data indicate, in other words, that between 49% and 100% of PreKindergarten students who were classified as "did not meet proficiency" on the Winter *ISIP Español LT* were also classified as "did not meet proficiency" by one of the IGDIs subtests when proficiency was defined as performing above the 40th percentile.

The specificity values for Winter *ISIP Español LT* were within a slightly narrower range, ranging from .60 for the *Identificación de las Letras* IGDIs subtest to .77 for the *Identificación de los Dibujos* subtest. In other words, between 60% and 79% of the students who were classified as "met proficiency" on the IGDIs were also classified as "met proficiency" by *ISIP Español LT* when administered in the Winter of PreKindergarten. This also indicates that between 23% - 40% of students were classified as "did not meet proficiency" on the *ISIP Español LT* in the Winter of PreKindergarten who were classified as "did not meet proficiency" by the *IGDIs Español.*

We also report the specificity of the Winter *ISIP Español LT* Overall scale score when the sensitivity is held at one of three fixed rates: .70, .80, and .90. We present these results in Table 31.

Table 31
*Specificity of **Winter** ISIP Español LT overall scale score for predicting meeting proficiency (above the 40th percentile) on IGDIs Español subtests when sensitivity values are fixed (n = 90)*

Subtest	.70	.80	.90
Denominación de los Dibujos	0.67	0.45	0.22
Verbos Expresivos	0.38	0.25	0.13
Denominación de las Letras	0.72	0.68	0.64
Identificación de los Sonidos	0.64	0.46	0.23
Primeros Sonidos	0.44	0.29	0.15

These data indicate that when the sensitivity for the Winter *ISIP Español LT* overall scale score is held constant at .70 (such that 70% of the students identified as "met proficiency" on *ISIP Español LT* are identified as "met proficiency" on an *IGDIs Español* subtest) the specificity associated with the IGDIs subtests ranged from .38 (*Verbos Expresivos*) to .72 (*Denominación de las Letras*). In other words, these data indicate when 70% of students are classified as "met proficiency" on the Winter *ISIP Español LT* using the overall scale score, the percentage of students who were correctly classified as "did not meet proficiency" on the *IGDIs Español* ranged from 38% to 72%, depending on the *IGDIs Español* subtest. Closer examination of the values reported in Table 32 indicates that, on average, as the fixed sensitivity value for *ISIP Español LT* overall scale score in the Winter increases (and subsequently, more students are identified as "meets proficiency"), the specificity values for each *IGDIs Español* subtest decreases (in some cases quite dramatically).

The PPV, or precision of classification, for the Winter *ISIP Español LT* overall scale score was relatively low, ranging from .05 to .68, depending on the *IGDIs Español* subtest. This indicates that between 5% - 68% of the students who were truly students who "did not meet proficiency" were classified as "did not meet proficiency" by the Winter *ISIP Español LT* overall scale score and the *IGDIs Español* when the threshold for passing was set above the 40th percentile. The NPV ranged .0.60 – 1.00, indicating that 60% - 100% of the students who were truly those who "did not meet proficiency" were classified as students who "did not meet proficiency" by the Winter *ISIP Español LT* overall scale score and an *IGDIs Español* subtest.

The accuracy of identification using the Winter *ISIP Español LT* overall scale score ranged from .61 - .72, indicating that the percent of students correctly classified by the Winter *ISIP Español* LT with respect to *IGDIs Español* performance when proficiency was identified as performing at the 40th percentile and above was between 61% and 72% for PreKindergarten. The AUC indices ranged from .57 - .80. Using the guidelines suggested by Kettler et al. (2014), the AUC indices are low to moderate, with the exception of the AUC for the *Denominación de las Letras* subtest for which the AUC value was .80 and is considered high.

The classification accuracy indices varied slightly for the Winter *ISIP Español LT* overall scale score when examining performance on the five *IGDIs Español* subtests with proficiency defined as performing above the 15th and 40th percentiles. With the exception of the *Identificación de los Sonidos* subtest, for example, the sensitivity values were greater when the threshold for proficiency for the *IGDIs Español* was set above the 15th percentile, while the specificity values for all *IGDIs Español* subtests were greater when the threshold for proficiency was set above the 40th percentile. Less consistency was observed when comparing the Accuracy and AUC indices between the two proficiency thresholds. The accuracy of the Winter *ISIP Español LT* overall scale score predicting performance on the *IGDIs Español* was greater for the *Verbos Expresivos* and *Primeros Sonidos* when the proficiency threshold was defined as above the 15th percentile but was greater for all other *IGDIs Español* subtests (e.g., *Denominación de los Dibujos, Denominación de las Letras,* and *Identificación de los* Sonidos) when proficiency was defined as performing above the 40th percentile. The AUC values were relatively comparable across the two models for all but two *IGDIs Español* subtests, *Identificación de los Sonidos* and *Primeros Sonidos,* for which the AUC values were greater when proficiency was defined above the 40th percentile. For example, the Winter *ISIP Español LT* overall scale score was able to accurately

predict passing status on the *Identificación de los Sonidos* subtest for 27% *more* students when the threshold for proficiency was defined as above the 40th percentile.

*Classification accuracy using **Spring** ISIP Español LT scores.* In the paragraphs that follow, we present the results of the classification accuracy analyses conducted using Spring *ISIP Español LT* scores to predict performance on the *IGDIs Español* subtests in the Spring.

Table 32
*Classification accuracy of **Spring** ISIP Español LT overall scale score on IGDIs Español subtests, with passing scores above the 40th percentile (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC[a]
Denominación de los Dibujos	0.42	0.73	0.28	0.58	0.53	0.63	0.60	0.57 (0.47, 0.67)
Verbos Expresivos	0.34	0.67	0.33	0.67	0.47	0.54	0.52	0.50 (0.40, 0.60)
Denominación de las Letras	1.00	0.68	0.32	0.00	0.07	1.00	0.69	0.84 (0.79, 0.89)
Identificación de los Sonidos	0.73	0.72	0.28	0.27	0.27	0.95	0.72	0.72 (0.58, 0.87)
Primeros Sonidos	0.40	0.69	0.32	0.60	0.33	0.75	0.61	0.54 (0.43, 0.66)

Table 33
*Classification accuracy of **Spring** ISIP Español LT Destreza fonológica y fonética scale score on IGDIs Español subtests, with passing scores above the 40th percentile (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.40	0.80	0.20	0.61	0.60	0.65	0.63	0.60 (0.50, 0.70)
Verbos Expresivos	0.29	0.73	0.27	0.07	0.48	0.55	0.53	0.51 (0.42, 0.61)
Denominación de las Letras	0.50	0.73	0.28	0.50	0.04	0.98	0.72	0.61 (0.12, 1.00)
Identificación de los Sonidos	0.73	0.78	0.22	0.27	0.32	0.95	0.78	0.76 (0.61, 0.90)
Primeros Sonidos	0.36	0.75	0.25	0.64	0.36	0.75	0.64	0.56 (0.45, 0.67)

Table 34
*Classification accuracy of **Spring** ISIP Español LT Vocabulario scale score on IGDIs Español subtests, with passing scores above the 40th percentile*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.42	0.71	0.29	0.58	0.52	0.62	0.58	0.56 (0.46, 0.67)
Verbos Expresivos	0.42	0.71	0.29	0.59	0.19	0.91	0.66	0.61 (0.46, 0.66)
Denominación de las Letras	1.00	0.67	0.33	0.00	0.07	1.00	0.67	0.83 (0.78, 0.88)
Identificación de los Sonidos	0.55	0.68	0.32	0.46	0.19	0.91	0.66	0.61 (0.45, 0.78)
Primeros Sonidos	0.44	0.69	0.31	0.56	0.36	0.76	0.62	0.56

(0.45, 0.68)

Table 35
*Classification accuracy of **Spring** ISIP Español LT Comprensión Auditiva scale score on IGDIs Español subtests, with passing scores above the **40th** percentile (n = 90)*

Subtest	Sn	Sp	FPR	FNR	PPV	NPV	Acc	AUC
Denominación de los Dibujos	0.68	0.65	0.35	0.32	0.59	0.73	0.66	0.67 (0.57, 0.77)
Verbos Expresivos	0.59	0.58	0.42	0.42	0.55	0.62	0.58	0.58 (0.48, 0.69)
Denominación de las Letras	1.00	0.52	0.48	0.00	0.05	1.00	0.53	0.76 (0.71, 0.81)
Identificación de los Sonidos	0.73	0.54	0.46	0.27	0.18	0.93	0.56	0.63 (0.48, 0.78)
Primeros Sonidos	0.56	0.53	0.47	0.44	0.32	0.76	0.54	0.55 (0.43, 0.66)

Data from Table 32 reveals that the sensitivity of the Spring *ISIP Español LT* Overall scale score ranged from of .34 for the *Verbos Expresivos* subtest to 1.00 for the *Denominación de las Letras* subtest. These data indicate, in other words, that between 34% and 100% of PreKindergarten students who were classified as "did not meet proficiency" on the Spring *ISIP Español LT* were also classified as "did not meet proficiency" by one of the IGDIs subtests when proficiency was defined as performing above the 40th percentile.

The specificity values for Winter *ISIP Español LT* were within a significantly narrower range, ranging from .67 for the *Verbos Expresivos* subtest to .73 for the *Denominación de los Dibujos* subtest. In other words, between 67% and 73% of the students who were classified as "met proficiency" on the *IGDIs Español* were also classified as "met proficiency" by *ISIP Español LT* when administered in the Spring of PreKindergarten. This also indicates that between 27% - 33% of students were classified as "did not meet proficiency" on the *ISIP Español LT* in the Spring of PreKindergarten who were classified as "did not meet proficiency" by the *IGDIs Español.*

We also report the specificity of the Spring *ISIP Español LT* Overall scale score when the sensitivity is held at one of three fixed rates: .70, .80, and .90. We present these results in Table 36.

Table 36
*Specificity of **Spring** ISIP Español LT overall scale score for predicting meeting proficiency (above the 40th percentile) on IGDIs Español subtests when sensitivity values are fixed (n = 90)*

Subtest	.70	.80	.90
Denominación de los Dibujos	0.38	0.25	0.13
Verbos Expresivos	0.30	0.20	0.10
Denominación de las Letras	0.78	0.75	0.71
Identificación de los Sonidos	0.73	0.53	0.26
Primeros Sonidos	0.34	0.22	0.12

These data indicate that when the sensitivity for the Spring *ISIP Español LT* overall scale score is held constant at .70 (such that 70% of the students identified as "met proficiency" on *ISIP Español LT* are identified as "met proficiency" on an *IGDIs Español* subtest) the specificity associated with the IGDIs subtests ranged from .30 (*Verbos Expresivos*) to .78 (*Denominación de las Letras*). In other words, these data indicate when 70% of students are classified as "met proficiency" on the Spring *ISIP Español LT* using the overall scale score, the percentage of students who were correctly classified as "did not meet proficiency" on the *IGDIs Español* ranged from 30% to 78%, depending on the *IGDIs Español* subtest. Closer examination of the values reported in Table 37 indicates that, on average, as the fixed sensitivity value for *ISIP Español LT* overall scale score in the Spring increases (and subsequently, more students are identified as "meets proficiency"), the specificity values for each *IGDIs Español* subtest decreases (in some cases quite dramatically).

The PPV, or precision of classification, for the Spring *ISIP Español LT* overall scale score was relatively low, ranging from .07 to .53, depending on the *IGDIs Español* subtest. This indicates that between 7% - 53% of the students who were truly students who "did not meet proficiency" were classified as "did not meet proficiency" by the Spring *ISIP Español LT* overall scale score and the *IGDIs Español* when the threshold for passing was set above the 40th percentile. The NPV ranged .0.54 – 1.00, indicating that 54% - 100% of the students who were truly those who "did not meet proficiency" were classified as students who "did not meet proficiency" by the Spring *ISIP Español LT* overall scale score and an *IGDIs Español* subtest.

The accuracy of identification using the Spring *ISIP Español LT* overall scale score ranged from .52 - .72, indicating that the percent of students correctly classified by the Spring *ISIP Español* LT with respect to *IGDIs Español* performance when proficiency was identified as performing at the 40th percentile and above was between 52% and 72% for PreKindergarten. The AUC indices ranged from .50 - .84. Using the guidelines suggested by Kettler et al. (2014), the AUC indices are low to moderate, with the exception of the AUC for the *Denominación de las Letras* subtest for which the AUC value was .80 and is considered high.

The classification accuracy indices varied slightly for the Spring *ISIP Español LT* overall scale score when examining performance on the five *IGDIs Español* subtests with proficiency defined as performing above the 15th and 40th percentiles. With the exception of the *Identificación de los Sonidos* and *Primeros Sonidos* subtests, for example, the sensitivity values were greater when the threshold for proficiency for the *IGDIs Español* was set above the 15th percentile. With respect to specificity the values were comparable for the two proficiency thresholds for the *Verbos Expresivos* and *Denominación de las Letras* subtests but were slightly higher for the other subtests when proficiency was defined as performing above the 40th percentile. Less consistency was observed when comparing the Accuracy and AUC indices between the two proficiency thresholds. The accuracy of the Spring *ISIP Español LT* overall scale score predicting performance on the *IGDIs Español* subtests was greater for the *Denominación de los Dibujos* and *Verbos Expresivos* subtests when the proficiency threshold was set as above the 15th percentile but was greater for all other *IGDIs Español* subtests (e.g., *Denominación de las Letras, Identificación de los Sonidos,* and *Primeros Sonidos)* when proficiency was defined as performing above the 40th percentile. There does not appear to be much consistency with respect to the better predictive model when examining the AUC values, as the AUC values were greater

when predicting which students would (or would not) demonstrate proficiency on the *Identificación de los Sonidos* and *Primeros Sonidos* subtests when proficiency was defined as performing above the 15th percentile but were greater for all other *IGDIs Español* subtests when proficiency was defined as performing above the 40th percentile.

Summary of Classification Accuracy for PreKindergarten

One possible explanation for the relatively low classification accuracy analyses for the *ISIP Español LT* when predicting performance on the *IGDIs Español* is the differences in breadth of early literacy skills assessed and the level at which the scores are reported for the two assessments. While the *IGDIs Español* focuses primarily on early phonological awareness and phonemic awareness skills (e.g., letter identification, sound identification, identification of first sounds, etc.), *ISIP Español LT* includes some more complex early literacy skills (e.g., vocabulary and comprehension). A more notable difference, however, is the level at which student performance is reported by these two Spanish early literacy assessments; although the *IGDIs Español* reports student performance on each discrete skill, performance for the *ISIP Español* is reported at the early literacy *domain* level, such as phonological and phonemic awareness. As an example, the *ISIP Español LT Destreza fonológica y fonética* subtest includes items that assess students' phoneme and syllable awareness, letter-sound correspondence, and initial sound knowledge, just as *IGDIs Español* does, but performance on these specific item types is not reported as part of the *ISIP Español LT* system. It may be that stronger classification accuracy results may have been obtained if the analyses included student scores on these discrete skills as measured by the *ISIP Español LT* assessment.

Criterion-Related Evidence for Validity

In this section, we present first the concurrent-related validity evidence collected for the *ISIP Español* assessments, followed by the predictive-related validity evidence.

Concurrent-Related Validity Evidence

Concurrent-related evidence for validity examines the relation between performance on a universal screening assessment and a criterion assessment with similar content that is administered at the same point in time. Concurrent-related evidence for validity for the Winter administrations of the *ISIP Español* assessment was calculated by determining the correlation between the scaled scores of the *ISIP Español* assessment and the scaled scores for *FastBridge Early Reading* assessment. Concurrent-related evidence for validity for the Spring administrations of the *ISIP Español* assessment was calculated by determining the correlation between the scaled scores of the *ISIP Español* assessment and the scaled scores for *FastBridge Early Reading*, and IGDIs *Español* (PreKindergarten). For the purposes of parsimony, we present and interpret the correlation coefficients based on the overall/composite scaled scores within the narrative of this technical report. The concurrent correlation coefficients for the overall/composite scaled scores and all subtest scores are available in Appendix A. Concurrent correlations for Subgroups are presented in Appendix B.

The correlation coefficients (and their corresponding 95% confidence intervals) for concurrent-related evidence of validity for the *ISIP Español LT* and *ISIP Español LA* for PreKindergarten are presented in Table 37.

Table 37
Concurrent-related evidence for validity with IGDIs Español

IGDIs Subtest	Correlation Coefficient
Denominación de los Dibujos	0.21
	(-0.003, 0.40)
Verbos Expresivos	0.12
	(-0.15, 0.27)
Denominación de las Letras	0.33
	(0.14, 0.51)
Identificación de los Sonidos	0.15
	(-0.09, 032)
Primeros Sonidos	0.07
	(-0.06, 0.35)

Predictive-Related Evidence for Validity

Predictive-related evidence for validity examines the relation between performance on a universal screening assessment and a criterion assessment that is administered at some time in the future. Predictive-related evidence for validity was collected for (a) Fall *ISIP Español* relative to each of the criterion assessments administered in the Spring, and (b) Winter *ISIP Español* relative to the each of the criterion assessments administered in the Spring. Again, for purposes of parsimony we present and interpret the results based on overall/composite scaled scores in Table 38 (with 95% CI) but correlations among overall/composite scores and all subtest scores are available in Appendix C. Predictive correlations for Subgroups are presented in Appendix D.

Table 38
Predictive-related validity evidence for ISIP Español

Assessment	Fall ISIP Español	Winter ISIP Español
IGDIs Español DD	0.32	0.36
	(0.10, 0.51)	(0.17, 0.53)
IGDIs Español VE	0.29	0.24
	(0.08, 0.48)	(0.03, 0.43)
IGDIs Español DL	0.18	0.28
	(-0.05, 0.38)	(0.08, 0.46)
IGDIs Español IS	0.24	0.21
	(0.01, 0.44)	(0.00, 0.40)
IGDIs Español PS	0.25	0.22
	(0.03, 0.45)	(0.01, 0.41)
FB ER	0.20	0.21

(-0.02, 0.41)	(0.01, 0.40)

Validity Evidence Disaggregated by Subgroup

The validity analyses were disaggregated by gender (male/female) and economically disadvantaged (yes/no). Eligibility for free or reduced price meals in the National School Lunch program was used as a proxy for the economically disadvantaged variable. Given the focus of the study, which required that our participants be Spanish-speaking, and because the majority of students in our sample were Hispanic/Latino, we do not report results disaggregated by race/ethnicity

Concurrent-Related Validity Evidence Disaggregated by Subgroup

The evidence for concurrent-related validity evidence is disaggregated by two relevant subgroups – gender and socioeconomic status – in Table 39. In general, concurrent-related coefficients for validity across subgroups are similar in magnitude and less than .15 from each other.

Table 39
Concurrent-related evidence for validity disaggregated by subgroup

Season / Assessment	Overall Coefficient	Gender		Economically Disadvantaged	
		Male	Female	Yes	No
Winter					
FB ER	0.24 (0.03, 0.44)	0.26 (-0.05, 0.52)	0.22 (-0.08, 0.47)	0.21 (-0.02, 0.41)	0.60 (-0.01, 0.88)
Spring					
IGDIs Español DD	0.21 (-0.003, 0.40)	0.40 (0.12, 0.63)	0.21 (-0.003, 0.40)	0.22 (0.00, 0.42)	0.22 (0.00, 0.42)
IGDIs Español VE	0.12 (-0.15, 0.27)	0.25 (-0.06, 0.51)	0.12 (-0.15, 0.27)	0.17 (-0.06, 0.38)	0.17 (-0.06, 0.38)
IGDIs Español DL	0.33 (0.14, 0.51)	0.45 (0.18, 0.66)	0.33 (0.14, 0.51)	0.33 (0.11, 0.51)	0.33 (0.11, 0.51)
IGDIs Español IS	0.15 (-0.09, 032)	0.18 (-0.13, 0.45)	015 (-0.09, 0.32)	0.14 (-0.08, 0.36)	0.14 (-0.08, 0.36)
IGDIs Español PS	0.07 (-0.06, 0.35)	0.12 (-0.19, 0.41)	0.07 (-0.06, 0.35)	0.12 (-0.11, 0.33)	0.12 (-0.11, 0.33)
FB ER	0.19 (-0.11, 0.48)	0.20 (-0.11, 0.48)	0.15 (-0.15, 0.42)	0.19 (-0.03, 0.40)	0.19 (-0.03, 0.40)

Predictive-Related Evidence for Validity Disaggregated by Subgroup

The evidence for predictive-related validity evidence is disaggregated by the two relevant subgroups (gender and economically disadvantaged status) and presented in Tables 40 (using Fall *ISIP Español*) and 41 (using *Winter ISIP Español*), respectively.

Table 40

Predictive-related evidence for validity disaggregated by subgroup (Fall ISIP)

Season / Assessment	Overall Coefficient	Gender		Economically Disadvantaged	
		Male	Female	Yes	No
Winter					
ISIP Overall	0.40 (0.20, 0.57)	0.28 (-0.06, 0.63)	0.53 (0.28, 0.72)	0.45 (0.23, 0.62)	0.09 (-0.57, 0.63)
FB ER	0.09 (-0.14, 0.30)	0.09 (-0.24, 0.41)	0.08 (-0.22, 0.37)	0.09 (-0.15, 0.32)	0.09 (-0.15, 0.32)
Spring					
IGDIs Español DD	0.32 (0.10, 0.51)	0.30 (-0.03, 0.57)	0.36 (0.06, 0.60)	0.30 (0.06, 0.50)	0.68 (0.13, 0.91)
IGDIs Español VE	0.29 (0.08, 0.48)	0.27 (-0.07, 0.55)	0.32 (0.01, 0.57)	0.27 (0.03, 0.48)	0.50 (-0.14, 0.85)
IGDIs Español DL	0.18 (-0.05, 0.38)	0.20 (-0.14, 0.49)	0.11 (-0.20, 0.40)	0.14 (-0.10, 0.37)	0.44 (-0.22, 0.82)
IGDIs Español IS	0.24 (0.01, 0.04)	0.33 (0.00, 0.59)	0.15 (-0.16, 0.43)	0.25 (0.01, 0.46)	0.07 (-0.55, 0.64)
IGDIs Español PS	0.25 (0.03, 0.45)	0.21 (-0.13, 0.50)	0.27 (-0.04, 0.53)	0.26 (0.02, 0.47)	0.10 (-0.53, 0.60)
ISIP Overall	0.29 (0.07, 0.48)	0.41 (0.09, 0.65)	0.15 (-0.16, 0.43)	0.36 (0.13, 0.55)	0.05 (-0.57, 0.63)
FB ER	0.20 (-0.02, 0.41)	0.18 (-0.16, 0.49)	0.20 (-0.11, 0.47)	0.23 (-0.01, 0.45)	-0.06 (-0.64, 0.56)

Table 41

Predictive-related evidence for validity disaggregated by subgroup (Winter ISIP)

Assessment	Overall Coefficient	Gender		Economically Disadvantaged	
		Male	Female	Yes	No
IGDIs Español DD	0.36	0.48	0.24	0.38	0.23
	(0.17, 0.53)	(0.21, 0.68)	(-0.06, 0.49)	(0.17, 0.55)	(-0.43, 0.73)
IGDIs Español VE	0.24	0.24	0.23	0.24	0.24
	(0.03, 0.43)	(-0.05, 0.52)	(-0.07, 0.48)	(0.02, 0.44)	(-0.42, 0.74)
IGDIs Español DL	0.28	0.37	0.11	0.29	0.23
	(0.08, 0.46)	(0.08, 0.60)	(-0.19, 0.39)	(0.07, 0.48)	(-0.43, 0.73)
IGDIs Español IS	0.21	0.32	0.08	0.23	0.07
	(0.00, 0.40)	(0.02, 0.56)	(-0.21, 0.37)	(0.01, 0.43)	(-0.55, 0.65)
IGDIs Español PS	0.22	0.13	0.29	0.20	0.54
	(0.01, 0.41)	(-0.18, 0.42)	(0.00, 0.54)	(-0.02, 0.41)	(-0.09, 0.86)
ISIP Overall	0.37	0.39	0.35	0.40	0.29
	(0.18, 0.53)	(0.11, 0.62)	(0.07, 0.58)	(0.19, 0.57)	(-0.38, 0.76)
FB ER	0.21	0.14	0.28	0.17	0.66
	(0.01, 0.40)	(-0.18, 0.42)	(-0.01, 0.52)	(-0.05, 0.38)	(0.10, 0.90)

In general, predictive-related coefficients for validity using the Fall *ISIP Español* assessments are similar in magnitude and stable across subgroups, with differences less than .15. Furthermore, predictive-related coefficients for validity using the Winter *ISIP Español* assessments are similar in magnitude and stable across subgroups, with differences less than .15. Exceptions to this can be seen with respect to gender in PreKindergarten for four of the five *IGDIs Español* subtests. Differences of greater than .15 were also observed for economically disadvantaged status for three of the five *IGDIs Español* subtests. As stated previously, because the *IGDIs Español* and FB ER Spanish are the only criterion assessments that provide predictive-related evidence for PreKindergarten, items or tasks on the *ISIP Español LT* may need to be examined further. However, when interpreting the disaggregated coefficients for economically disadvantaged status it is also necessary to remember that the majority of students in our sample qualified for Free or Reduced Lunch and, consequently, that unbalanced sample sizes may be influencing the results.

Conclusions

This study collected evidence to evaluate the appropriateness of Istation's Indicators of Progress (ISIP) Español *Lectura Temprana* assessment for making screening decisions for students in PreKindergarten. Evidence was evaluated and included: (a) generalizability of the sample, (b) classification accuracy of the performance level, (c) evidence for validity, and (d) evidence for validity disaggregated by subgroup.

The generalizability of the sample is moderate, as indicated in Table 6. The sample is similar to both the statewide and national proportions for gender and is relatively comparable to participating states with respect to the proportion of students whose race was Hispanic/Latino. Not surprisingly (given the strategic recruitment of a Spanish-speaking ELs), the proportion of Hispanic/Latino students in our sample was almost twice as large as that of the participating states and almost four times as large as the nationwide sample. Given the potentially confounded

nature of race/ethnicity and socioeconomic status (e.g., approximately 30% of Hispanic/Latino children under the age of 18 live in poverty compared to 20% of children nationwide; Krogstad, 2014), it may also not be surprising that the proportion of students eligible for Free or Reduced Price Lunch is almost twice as large as the Texas and nationwide samples. The results of this study may be generalizable to the larger student population of Texas, as well as other states with similar demographics.

We presented summaries of evidence for the classification accuracy of *ISIP Español*. We hypothesize these results may be a byproduct of potentially two contributing factors: (1) the difference in the breadth and complexity of the early literacy skills assessed by both assessments, and (2) the difference in the levels at which information about student performance is reported (i.e., discrete skills for *IGDIs Español* and broad domain-level reporting for *ISIP Español*).

We also presented summaries of the levels of evidence for the concurrent-related validity evidence of the *ISIP Español* assessments with the multiple criterion assessments. These data suggest that although additional concurrent-related validity evidence may need to be gathered for PreKindergarten. Predictive-related validity evidence may also need to be gathered. Examination of the evidence for validity disaggregated by subgroups follows similar trends as the evidence presented for aggregate level data.

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Appendix A:

Concurrent Correlation Coefficients for Overall/Composite Scale Scores and All Subtest Scores

Middle of the Year

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Concurrent-related evidence for validity (MOY) Pre-K

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ISIP Español	Fast Bridge	Coefficient	95% Confidence Interval	
			Lower	Upper
Overall				
	Composite	0.236	0.030	0.442
	Concepts of Print	0.216	0.009	0.405
	Letter Sounds	0.162	-0.046	0.357
	Onset Sounds	0.275	0.072	0.456
	Syllable Reading	-0.092	-0.293	0.117
Listening Comprehension				
	Composite	0.226	0.019	0.413
	Concepts of Print	0.187	-0.021	0.379
	Letter Sounds	0.117	-0.092	0.316
	Onset Sounds	0.234	0.028	0.421
	Syllable Reading	0.101	-0.108	0.302
Phonemic Awareness				
	Composite	0.263	0.059	0.447
	Concepts of Print	0.084	-0.125	0.286
	Letter Sounds	0.260	0.056	0.443
	Onset Sounds	0.226	0.062	0.448
	Syllable Reading	0.080	-0.129	0.283
Vocabulary				
	Composite	0.093	-0.116	0.294
	Concepts of Print	0.227	0.021	0.415
	Letter Sounds	-0.008	-0.215	0.119
	Onset Sounds	0.146	-0.063	0.343
	Syllable Reading	-0.203	-0.394	0.004

End of the Year

Concurrent-related evidence for validity (EOY) Pre-K

ISIP Español	Concurrent Assessment	Coefficient	95% Confidence Interval	
			Lower	Upper
Overall				
	FB-Composite	0.187	-0.022	0.380
	FB-Concepts of Print	0.100	-0.111	0.302
	FB-Letter Sounds	0.187	-0.023	0.380
	FB-Onset Sounds	0.125	-0.086	0.325
	FB-Syllable Reading	0.152	-0.058	0.350
	IGDI-Picture Naming	0.205	-0.003	0.397
	IGDI-Sound ID	0.145	-0.090	0.321
	IGDI-Letter ID	0.334	0.135	0.507
	IGDI-First Sounds	0.065	-0.062	0.346
	IGDI-Expressive Verbs	0.121	-0.145	0.270
Listening Comprehension				
	FB-Composite	0.373	0.179	0.539
	FB-Concepts of Print	0.336	0.138	0.509
	FB-Letter Sounds	0.387	0.194	0.551
	FB-Onset Sounds	0.471	0.292	0.619
	FB-Syllable Reading	0.228	0.020	0.416
	IGDI-Picture Naming	0.393	0.201	0.556
	IGDI-Sound ID	0.233	0.044	0.435
	IGDI-Letter ID	0.436	0.251	0.591
	IGDI-First Sounds	0.308	0.026	0.421
	IGDI-Expressive Verbs	0.250	0.106	0.485
Phonemic Awareness				
	FB-Composite	0.287	0.084	0.468
	FB-Concepts of Print	0.266	0.061	0.449
	FB-Letter Sounds	0.269	0.064	0.452
	FB-Onset Sounds	0.265	0.060	0.449
	FB-Syllable Reading	0.216	0.008	0.406
	IGDI-Picture Naming	0.236	0.029	0.423
	IGDI-Sound ID	0.314	-0.035	0.369
	IGDI-Letter ID	0.352	0.155	0.522

	IGDI-First Sounds	0.125	0.113	0.490
	IGDI-Expressive Verbs	0.175	-0.086	0.325
Vocabulary				
	FB-Composite	0.037	-0.173	0.243
	FB-Concepts of Print	-0.080	-0.283	0.131
	FB-Letter Sounds	0.053	-0.157	0.258
	FB-Onset Sounds	-0.040	-0.247	0.169
	FB-Syllable Reading	0.046	-0.164	0.252
	IGDI-Picture Naming	0.118	-0.093	0.318
	IGDI-Sound ID	-0.041	-0.169	0.247
	IGDI-Letter ID	0.220	0.012	0.410
	IGDI-First Sounds	-0.006	-0.247	0.169
	IGDI-Expressive Verbs	0.041	-0.214	0.203

Appendix B:

Concurrent Correlation Coefficients for Subgroups

Middle of the Year

ISIP Español	Fast Bridge	Overall Coefficient	Coefficient	95% Confidence Interval	
				Lower	Upper
Overall					
	Composite	0.236	0.215	-0.078	0.472
	Concepts of Print	0.216	0.239	-0.052	0.492
	Letter Sounds	0.162	0.160	-0.133	0.428
	Onset Sounds	0.275	0.251	-0.039	0.502
	Syllable Reading	-0.092	-0.282	-0.526	0.006
Listening Comprehension					
	Composite	0.226	0.290	0.003	0.533
	Concepts of Print	0.187	0.257	-0.033	0.506
	Letter Sounds	0.117	0.096	-0.197	0.373
	Onset Sounds	0.234	0.298	0.012	0.539
	Syllable Reading	0.101	0.151	-0.142	0.420
Phonemic Awareness					
	Composite	0.263	0.332	0.050	0.565
	Concepts of Print	0.084	0.148	-0.145	0.418
	Letter Sounds	0.260	0.351	0.071	0.580
	Onset Sounds	0.226	0.331	0.048	0.564
	Syllable Reading	0.080	-0.017	-0.303	0.272
Vocabulary					
	Composite	0.093	-0.038	-0.321	0.252
	Concepts of Print	0.227	0.157	-0.136	0.425
	Letter Sounds	-0.008	-0.121	-0.394	0.172
	Onset Sounds	0.146	0.009	-0.279	0.295
	Syllable Reading	-0.203	-0.328	-0.562	-0.045

Concurrent-related evidence for validity (MOY) Pre-K Females

Concurrent-related evidence for validity (MOY) Pre-K Males

ISIP Español	Fast Bridge	Overall Coefficient	Coefficient	95% Confidence Interval	
				Lower	Upper
Overall					
	Composite	0.236	0.259	-0.045	0.519
	Concepts of Print	0.216	0.234	-0.072	0.499
	Letter Sounds	0.162	0.167	-0.141	0.445
	Onset Sounds	0.275	0.307	0.008	0.556
	Syllable Reading	-0.092	0.008	-0.293	0.308
Listening Comprehension					
	Composite	0.226	0.163	-0.145	0.442
	Concepts of Print	0.187	0.169	-0.139	0.447
	Letter Sounds	0.117	0.140	-0.167	0.423
	Onset Sounds	0.234	0.153	-0.154	0.433
	Syllable Reading	0.101	0.094	-0.212	0.384
Phonemic Awareness					
	Composite	0.263	0.191	-0.115	0.465
	Concepts of Print	0.084	0.046	-0.258	0.342
	Letter Sounds	0.260	0.187	-0.120	0.461
	Onset Sounds	0.226	0.184	-0.123	0.459
	Syllable Reading	0.080	0.155	-0.152	0.435
Vocabulary					
	Composite	0.093	0.232	-0.073	0.498
	Concepts of Print	0.227	0.324	0.027	0.569
	Letter Sounds	-0.008	0.090	-0.216	0.381
	Onset Sounds	0.146	0.314	0.016	0.562
	Syllable Reading	-0.203	-0.129	-0.413	0.178

Concurrent-related evidence for validity (MOY) Pre-K Free/Reduced Lunch

ISIP Español	Fast Bridge	Overall Coefficient	Coefficient	95% Confidence Interval	
				Lower	Upper
Overall					
	Composite	0.236	0.205	-0.017	0.408
	Concepts of Print	0.216	0.231	0.010	0.430
	Letter Sounds	0.162	0.135	-0.089	0.346
	Onset Sounds	0.275	0.245	0.025	0.442
	Syllable Reading	-0.092	-0.109	-0.323	0.115
Listening Comprehension					
	Composite	0.226	0.206	-0.015	0.409
	Concepts of Print	0.187	0.155	-0.069	0.363
	Letter Sounds	0.117	0.104	-0.120	0.318
	Onset Sounds	0.234	0.229	0.008	0.428
	Syllable Reading	0.101	0.032	-0.191	0.251
Phonemic Awareness					
	Composite	0.263	0.219	-0.002	0.420
	Concepts of Print	0.084	0.056	-0.167	0.274
	Letter Sounds	0.260	0.215	-0.006	0.416
	Onset Sounds	0.226	0.226	0.005	0.426
	Syllable Reading	0.080	0.054	-0.169	0.272
Vocabulary					
	Composite	0.093	0.095	-0.129	0.310
	Concepts of Print	0.227	0.269	0.051	0.463
	Letter Sounds	-0.008	0.002	-0.219	0.223
	Onset Sounds	0.146	0.144	-0.080	0.354
	Syllable Reading	-0.203	-0.197	-0.401	0.025

Concurrent-related evidence for validity (MOY) Pre-K Not Free/Reduced Lunch

ISIP Español	Fast Bridge	Overall Coefficient	Coefficient	95% Confidence Interval	
				Lower	Upper
Overall					
	Composite	0.236	0.599	-0.002	0.882
	Concepts of Print	0.216	0.125	-0.513	0.675
	Letter Sounds	0.162	0.383	-0.282	0.799
	Onset Sounds	0.275	0.636	0.058	0.894
	Syllable Reading	-0.092	0.101	-0.531	0.661
Listening Comprehension					
	Composite	0.226	0.515	-0.122	0.852
	Concepts of Print	0.187	0.443	-0.214	0.824
	Letter Sounds	0.117	0.253	-0.409	0.741
	Onset Sounds	0.234	0.424	-0.236	0.816
	Syllable Reading	0.101	0.742	0.257	0.929
Phonemic Awareness					
	Composite	0.263	0.420	-0.241	0.814
	Concepts of Print	0.084	0.212	-0.445	0.720
	Letter Sounds	0.260	0.417	-0.244	0.813
	Onset Sounds	0.226	0.389	-0.275	0.802
	Syllable Reading	0.080	0.229	-0.430	0.729
Vocabulary					
	Composite	0.093	0.600	-0.001	0.882
	Concepts of Print	0.227	-0.099	-0.660	0.532
	Letter Sounds	-0.008	0.114	-0.521	0.669
	Onset Sounds	0.146	0.739	0.249	0.928
	Syllable Reading	-0.203	-0.187	-0.708	0.465

End of the Year

ISIP Español	Concurrent Assessment	Overall Coefficient	Coefficient	95% Confidence Interval	
				Lower	Upper
Overall					
	FB-Composite	0.187	0.15	-0.15	0.42
	FB-Concepts of Print	0.100	0.07	-0.22	0.35
	FB-Letter Sounds	0.187	0.15	-0.14	0.42
	FB-Onset Sounds	0.125	-0.07	-0.35	0.22
	FB-Syllable Reading	0.152	0.13	-0.16	0.41
	IGDI-Picture Naming	0.205	-0.01	-0.30	0.28
	IGDI-Sound ID	0.145	0.10	-0.19	0.38
	IGDI-Letter ID	0.334	0.13	-0.16	0.41
	IGDI-First Sounds	0.065	-0.04	-0.33	0.25
	IGDI-Expressive Verbs	0.121	-0.03	-0.32	0.26
Listening Comprehension					
	FB-Composite	0.373	0.41	0.14	0.62
	FB-Concepts of Print	0.336	0.38	0.10	0.60
	FB-Letter Sounds	0.387	0.45	0.19	0.65
	FB-Onset Sounds	0.471	0.51	0.26	0.70
	FB-Syllable Reading	0.228	0.23	-0.06	0.48
	IGDI-Picture Naming	0.393	0.44	0.17	0.65
	IGDI-Sound ID	0.233	0.28	-0.01	0.53
	IGDI-Letter ID	0.436	0.43	0.16	0.64
	IGDI-First Sounds	0.308	0.32	0.03	0.56
	IGDI-Expressive Verbs	0.250	0.37	0.09	0.60
Phonemic Awareness					
	FB-Composite	0.287	0.21	-0.09	0.47
	FB-Concepts of Print	0.266	0.21	-0.09	0.47
	FB-Letter Sounds	0.269	0.21	-0.08	0.47
	FB-Onset Sounds	0.265	0.16	-0.13	0.43
	FB-Syllable Reading	0.216	0.13	-0.16	0.40
	IGDI-Picture Naming	0.236	0.08	-0.21	0.36
	IGDI-Sound ID	0.314	0.25	-0.04	0.50

	IGDI-Letter ID	0.352	0.27	-0.02	0.52
	IGDI-First Sounds	0.125	0.14	-0.16	0.41
	IGDI-Expressive Verbs	0.175	0.10	-0.20	0.38
Vocabulary					
	FB-Composite	0.037	0.03	-0.25	0.32
	FB-Concepts of Print	-0.080	-0.08	-0.36	0.21
	FB-Letter Sounds	0.053	0.04	-0.25	0.32
	FB-Onset Sounds	-0.040	-0.25	-0.50	0.04
	FB-Syllable Reading	0.046	0.09	-0.20	0.37
	IGDI-Picture Naming	0.118	-0.10	-0.38	0.20
	IGDI-Sound ID	-0.041	-0.07	-0.35	0.23
	IGDI-Letter ID	0.220	-0.04	-0.33	0.25
	IGDI-First Sounds	-0.006	-0.19	-0.46	0.10
	IGDI-Expressive Verbs	0.041	-0.14	-0.41	0.16

Concurrent-related evidence for validity (EOY) Pre-K Males

ISIP Español	Concurrent Assessment	Overall Coefficient	Coefficient	95% Confidence Interval	
				Lower	Upper
Overall					
	FB-Composite	0.187	0.20	-0.11	0.48
	FB-Concepts of Print	0.100	0.11	-0.20	0.40
	FB-Letter Sounds	0.187	0.19	-0.12	0.47
	FB-Onset Sounds	0.125	0.25	-0.06	0.51
	FB-Syllable Reading	0.152	0.18	-0.14	0.46
	IGDI-Picture Naming	0.205	0.40	0.12	0.63
	IGDI-Sound ID	0.145	0.18	-0.13	0.45
	IGDI-Letter ID	0.334	0.45	0.18	0.66
	IGDI-First Sounds	0.065	0.12	-0.19	0.41
	IGDI-Expressive Verbs	0.121	0.25	-0.06	0.51
Listening Comprehension					
	FB-Composite	0.373	0.28	-0.03	0.53
	FB-Concepts of Print	0.336	0.27	-0.03	0.53
	FB-Letter Sounds	0.387	0.22	-0.09	0.49
	FB-Onset Sounds	0.471	0.40	0.11	0.63
	FB-Syllable Reading	0.228	0.22	-0.09	0.49
	IGDI-Picture Naming	0.393	0.40	0.11	0.63
	IGDI-Sound ID	0.233	0.13	-0.18	0.41
	IGDI-Letter ID	0.436	0.42	0.14	0.64
	IGDI-First Sounds	0.308	0.24	-0.07	0.50
	IGDI-Expressive Verbs	0.250	0.14	-0.16	0.43
Phonemic Awareness					
	FB-Composite	0.287	0.36	0.07	0.60
	FB-Concepts of Print	0.266	0.31	0.01	0.56
	FB-Letter Sounds	0.269	0.33	0.03	0.57
	FB-Onset Sounds	0.265	0.34	0.04	0.59
	FB-Syllable Reading	0.216	0.33	0.03	0.58
	IGDI-Picture Naming	0.236	0.38	0.09	0.61
	IGDI-Sound ID	0.314	0.39	0.10	0.61
	IGDI-Letter ID	0.352	0.40	0.12	0.63
	IGDI-First Sounds	0.125	0.09	-0.21	0.38

	IGDI-Expressive Verbs	0.175	0.24	-0.06	0.51
Vocabulary					
	FB-Composite	0.037	0.00	-0.30	0.31
	FB-Concepts of Print	-0.080	-0.10	-0.39	0.21
	FB-Letter Sounds	0.053	0.02	-0.29	0.32
	FB-Onset Sounds	-0.040	0.09	-0.22	0.38
	FB-Syllable Reading	0.046	-0.01	-0.31	0.30
	IGDI-Picture Naming	0.118	0.30	0.00	0.55
	IGDI-Sound ID	-0.041	-0.05	-0.34	0.26
	IGDI-Letter ID	0.220	0.37	0.08	0.60
	IGDI-First Sounds	-0.006	0.10	-0.20	0.39
	IGDI-Expressive Verbs	0.041	0.18	-0.12	0.46

Concurrent-related evidence for validity (EOY) Pre-K Free/Reduced Lunch

ISIP Español	Concurrent Assessment	Overall Coefficient	Coefficient	95% Confidence Interval	
				Lower	Upper
Overall					
	FB-Composite	0.187	0.19	-0.03	0.40
	FB-Concepts of Print	0.100	0.15	-0.08	0.36
	FB-Letter Sounds	0.187	0.18	-0.05	0.38
	FB-Onset Sounds	0.125	0.15	-0.08	0.36
	FB-Syllable Reading	0.152	0.16	-0.07	0.37
	IGDI-Picture Naming	0.205	0.22	0.00	0.42
	IGDI-Sound ID	0.145	0.14	-0.08	0.36
	IGDI-Letter ID	0.334	0.33	0.11	0.51
	IGDI-First Sounds	0.065	0.12	-0.11	0.33
	IGDI-Expressive Verbs	0.121	0.17	-0.06	0.38
Listening Comprehension					
	FB-Composite	0.373	0.43	0.23	0.60
	FB-Concepts of Print	0.336	0.37	0.16	0.55
	FB-Letter Sounds	0.387	0.45	0.25	0.61
	FB-Onset Sounds	0.471	0.51	0.32	0.66
	FB-Syllable Reading	0.228	0.27	0.05	0.47
	IGDI-Picture Naming	0.393	0.41	0.21	0.58
	IGDI-Sound ID	0.233	0.22	0.00	0.42
	IGDI-Letter ID	0.436	0.42	0.21	0.58
	IGDI-First Sounds	0.308	0.35	0.14	0.53
	IGDI-Expressive Verbs	0.250	0.32	0.11	0.51
Phonemic Awareness					
	FB-Composite	0.287	0.30	0.09	0.49
	FB-Concepts of Print	0.266	0.29	0.07	0.48
	FB-Letter Sounds	0.269	0.26	0.04	0.45
	FB-Onset Sounds	0.265	0.27	0.05	0.46
	FB-Syllable Reading	0.216	0.26	0.03	0.45
	IGDI-Picture Naming	0.236	0.24	0.02	0.44
	IGDI-Sound ID	0.314	0.34	0.12	0.52
	IGDI-Letter ID	0.352	0.35	0.14	0.53
	IGDI-First Sounds	0.125	0.15	-0.07	0.36

	IGDI-Expressive Verbs	0.175	0.21	-0.02	0.41
Vocabulary					
	FB-Composite	0.037	0.03	-0.19	0.25
	FB-Concepts of Print	-0.080	-0.02	-0.24	0.20
	FB-Letter Sounds	0.053	0.05	-0.18	0.27
	FB-Onset Sounds	-0.040	0.00	-0.23	0.22
	FB-Syllable Reading	0.046	0.02	-0.20	0.24
	IGDI-Picture Naming	0.118	0.14	-0.08	0.35
	IGDI-Sound ID	-0.041	-0.06	-0.28	0.16
	IGDI-Letter ID	0.220	0.21	-0.01	0.41
	IGDI-First Sounds	-0.006	0.06	-0.17	0.27
	IGDI-Expressive Verbs	0.041	0.09	-0.14	0.30

Concurrent-related evidence for validity (EOY) Pre-K Not Free/Reduced Lunch

ISIP Español	Concurrent Assessment	Overall Coefficient	Coefficient	95% Confidence Interval Lower	Upper
Overall					
	FB-Composite	0.187	0.19	-0.03	0.40
	FB-Concepts of Print	0.100	0.15	-0.08	0.36
	FB-Letter Sounds	0.187	0.18	-0.05	0.38
	FB-Onset Sounds	0.125	0.15	-0.08	0.36
	FB-Syllable Reading	0.152	0.16	-0.07	0.37
	IGDI-Picture Naming	0.205	0.22	0.00	0.42
	IGDI-Sound ID	0.145	0.14	-0.08	0.36
	IGDI-Letter ID	0.334	0.33	0.11	0.51
	IGDI-First Sounds	0.065	0.12	-0.11	0.33
	IGDI-Expressive Verbs	0.121	0.17	-0.06	0.38
Listening Comprehension					
	FB-Composite	0.373	0.43	0.23	0.60
	FB-Concepts of Print	0.336	0.37	0.16	0.55
	FB-Letter Sounds	0.387	0.45	0.25	0.61
	FB-Onset Sounds	0.471	0.51	0.32	0.66
	FB-Syllable Reading	0.228	0.27	0.05	0.47
	IGDI-Picture Naming	0.393	0.41	0.21	0.58
	IGDI-Sound ID	0.233	0.22	0.00	0.42
	IGDI-Letter ID	0.436	0.42	0.21	0.58
	IGDI-First Sounds	0.308	0.35	0.14	0.53
	IGDI-Expressive Verbs	0.250	0.32	0.11	0.51
Phonemic Awareness					
	FB-Composite	0.287	0.30	0.09	0.49
	FB-Concepts of Print	0.266	0.29	0.07	0.48
	FB-Letter Sounds	0.269	0.26	0.04	0.45
	FB-Onset Sounds	0.265	0.27	0.05	0.46
	FB-Syllable Reading	0.216	0.26	0.03	0.45
	IGDI-Picture Naming	0.236	0.24	0.02	0.44
	IGDI-Sound ID	0.314	0.34	0.12	0.52
	IGDI-Letter ID	0.352	0.35	0.14	0.53
	IGDI-First Sounds	0.125	0.15	-0.07	0.36

	IGDI-Expressive Verbs	0.175	0.21	-0.02	0.41
Vocabulary					
	FB-Composite	0.037	0.03	-0.19	0.25
	FB-Concepts of Print	-0.080	-0.02	-0.24	0.20
	FB-Letter Sounds	0.053	0.05	-0.18	0.27
	FB-Onset Sounds	-0.040	0.00	-0.23	0.22
	FB-Syllable Reading	0.046	0.02	-0.20	0.24
	IGDI-Picture Naming	0.118	0.14	-0.08	0.35
	IGDI-Sound ID	-0.041	-0.06	-0.28	0.16
	IGDI-Letter ID	0.220	0.21	-0.01	0.41
	IGDI-First Sounds	-0.006	0.06	-0.17	0.55
	IGDI-Expressive Verbs	0.041	0.09	-0.14	0.30

Appendix C:

Predictive Correlation Coefficients for Overall/Composite Scales Scores and All Subtest Scores

Beginning of Year to Middle of Year

Predictive-related evidence for validity BOY ISIP to MOY ISIP/Fast Bridge Pre-K				
			95% Confidence Interval	
BOY ISIP	MOY Assessment	Coefficient	Lower	Upper
Overall				
	ISIP Overall	0.40	0.20	0.57
	ISIP Listening Comprehension	0.26	0.05	0.46
	ISIP Phonemic Awareness	0.35	0.14	0.53
	ISIP Vocabulary	0.24	0.02	0.44
	FB Composite	0.09	-0.14	0.30
	FB Concepts of Print	0.17	-0.05	0.38
	FB Letter Sounds	0.04	-0.18	0.26
	FB Onset Sounds	0.11	-0.11	0.32
	FB Syllable Reading	-0.05	-0.27	0.17
Listening Comprehension				
	ISIP Overall	0.30	0.08	0.48
	ISIP Listening Comprehension	0.35	0.14	0.53
	ISIP Phonemic Awareness	0.30	0.08	0.49
	ISIP Vocabulary	0.14	-0.09	0.35
	FB Composite	0.26	0.04	0.46
	FB Concepts of Print	0.29	0.07	0.48
	FB Letter Sounds	0.18	-0.05	0.38
	FB Onset Sounds	0.26	0.04	0.46
	FB Syllable Reading	0.10	-0.13	0.31
Phonemic Awareness				
	ISIP Overall	0.42	0.21	0.58
	ISIP Listening Comprehension	0.27	0.05	0.46
	ISIP Phonemic Awareness	0.43	0.24	0.60
	ISIP Vocabulary	0.18	-0.04	0.39
	FB Composite	0.31	0.09	0.50
	FB Concepts of Print	0.15	-0.08	0.36
	FB Letter Sounds	0.32	0.11	0.51
	FB Onset Sounds	0.29	0.08	0.48

	FB Syllable Reading	0.14	-0.08	0.35
Vocabulary				
	ISIP Overall	0.23	0.01	0.43
	ISIP Listening Comprehension	0.15	-0.08	0.36
	ISIP Phonemic Awareness	0.13	-0.09	0.34
	ISIP Vocabulary	0.21	-0.01	0.41
	FB Composite	-0.15	-0.36	0.08
	FB Concepts of Print	0.11	-0.12	0.32
	FB Letter Sounds	-0.24	-0.44	-0.02
	FB Onset Sounds	-0.09	-0.31	0.13
	FB Syllable Reading	-0.21	-0.41	0.01

Beginning of Year to End of Year

	Predictive-related evidence for validity BOY ISIP to EOY Assessment Pre-K			
			95% Confidence Interval	
BOY ISIP	EOY Assessment	Coefficient	Lower	Upper
Overall				
	ISIP Overall	0.29	0.07	0.48
	ISIP Listening Comprehension	0.23	0.01	0.43
	ISIP Phonemic Awareness	0.41	0.21	0.58
	ISIP Vocabulary	0.01	-0.21	0.23
	FB Composite	0.20	-0.02	0.41
	FB Concept of Print	0.20	-0.03	0.40
	FB Onset Sounds	0.20	-0.03	0.40
	FB Letter Sounds	0.28	0.06	0.47
	FB Syllable Reading	0.14	-0.09	0.35
	IGDI-Picture Naming	0.32	0.10	0.51
	IGDI-Expressive Verbs	0.29	0.08	0.48
	IGDI-Letter Identification	0.18	-0.05	0.38
	IGDI-Sound Identification	0.24	0.01	0.44
	IGDI-First Sounds	0.25	0.03	0.45
Listening Comprehension				
	ISIP Overall	0.18	-0.04	0.39
	ISIP Listening Comprehension	0.27	0.05	0.47
	ISIP Phonemic Awareness	0.29	0.08	0.48
	ISIP Vocabulary	-0.03	-0.25	0.19
	FB Composite	0.24	0.02	0.44
	FB Concept of Print	0.20	-0.03	0.40
	FB Onset Sounds	0.17	-0.05	0.38
	FB Letter Sounds	0.27	0.05	0.47
	FB Syllable Reading	0.22	-0.01	0.42
	IGDI-Picture Naming	0.33	0.12	0.52
	IGDI-Expressive Verbs	0.35	0.14	0.53
	IGDI-Letter Identification	0.24	0.02	0.44
	IGDI-Sound Identification	0.17	-0.06	0.37
	IGDI-First Sounds	0.32	0.11	0.51

Phonemic Awareness			
ISIP Overall	0.41	0.21	0.58
ISIP Listening Comprehension	0.31	0.09	0.49
ISIP Phonemic Awareness	0.53	0.35	0.67
ISIP Vocabulary	0.07	-0.15	0.29
FB Composite	0.39	0.18	0.56
FB Concept of Print	0.32	0.11	0.51
FB Onset Sounds	0.40	0.20	0.57
FB Letter Sounds	0.45	0.25	0.61
FB Syllable Reading	0.25	0.03	0.45
IGDI-Picture Naming	0.30	0.08	0.49
IGDI-Expressive Verbs	0.24	0.02	0.44
IGDI-Letter Identification	0.29	0.07	0.48
IGDI-Sound Identification	0.36	0.15	0.54
IGDI-First Sounds	0.32	0.11	0.51
Vocabulary			
ISIP Overall	0.08	-0.15	0.29
ISIP Listening Comprehension	0.08	-0.14	0.30
ISIP Phonemic Awareness	0.15	-0.08	0.36
ISIP Vocabulary	-0.04	-0.26	0.18
FB Composite	-0.04	-0.26	0.19
FB Concept of Print	0.01	-0.22	0.23
FB Onset Sounds	-0.07	-0.29	0.15
FB Letter Sounds	0.03	-0.19	0.25
FB Syllable Reading	-0.01	-0.24	0.21
IGDI-Picture Naming	0.21	-0.01	0.42
IGDI-Expressive Verbs	0.20	-0.02	0.41
IGDI-Letter Identification	0.01	-0.22	0.23
IGDI-Sound Identification	0.03	-0.19	0.25
IGDI-First Sounds	0.09	-0.14	0.31

Middle of Year to End of Year

Predictive-related evidence for validity MOY ISIP to EOY Assessment Pre-K

MOY ISIP	EOY Assessment	Coefficient	95% Confidence Interval	
			Lower	Upper
Overall				
	ISIP-Overall	0.37	0.18	0.53
	ISIP-Listening Comprehension	0.31	0.12	0.49
	ISIP-Phonemic Awareness	0.39	0.21	0.55
	ISIP-Vocabulary	0.24	0.03	0.42
	FB-Composite	0.21	0.01	0.40
	FB-Concepts of Print	0.15	-0.06	0.35
	FB-Onset Sounds	0.25	0.05	0.44
	FB-Letter Sounds	0.30	0.09	0.47
	FB-Syllable Reading	0.11	-0.10	0.31
	IGDI-Picture Naming	0.36	0.17	0.53
	IGDI-Expressive Verbs	0.24	0.03	0.43
	IGDI-Letter Identification	0.28	0.08	0.46
	IGDI-Sound Identification	0.21	0.00	0.40
	IGDI-First Sounds	0.22	0.01	0.41
Listening Comprehension				
	ISIP-Overall	0.48	0.31	0.62
	ISIP-Listening Comprehension	0.56	0.40	0.68
	ISIP-Phonemic Awareness	0.43	0.24	0.58
	ISIP-Vocabulary	0.38	0.19	0.54
	FB-Composite	0.16	-0.05	0.35
	FB-Concepts of Print	0.22	0.02	0.41
	FB-Onset Sounds	0.13	-0.08	0.33
	FB-Letter Sounds	0.22	0.01	0.41
	FB-Syllable Reading	0.10	-0.11	0.30
	IGDI-Picture Naming	0.17	-0.04	0.37
	IGDI-Expressive Verbs	0.27	0.06	0.45
	IGDI-Letter Identification	0.22	0.01	0.41
	IGDI-Sound Identification	0.13	-0.08	0.33

	IGDI-First Sounds	0.12	-0.09	0.32
Phonemic Awareness				
	ISIP-Overall	0.25	0.05	0.44
	ISIP-Listening Comprehension	0.22	0.02	0.41
	ISIP-Phonemic Awareness	0.38	0.19	0.54
	ISIP-Vocabulary	0.07	-0.13	0.27
	FB-Composite	0.33	0.13	0.50
	FB-Concepts of Print	0.32	0.12	0.49
	FB-Onset Sounds	0.33	0.13	0.51
	FB-Letter Sounds	0.33	0.13	0.51
	FB-Syllable Reading	0.22	0.02	0.41
	IGDI-Picture Naming	0.26	0.06	0.45
	IGDI-Expressive Verbs	0.24	0.03	0.43
	IGDI-Letter Identification	0.35	0.15	0.52
	IGDI-Sound Identification	0.31	0.11	0.49
	IGDI-First Sounds	0.24	0.04	0.43
Vocabulary				
	ISIP-Overall	0.29	0.09	0.47
	ISIP-Listening Comprehension	0.24	0.04	0.43
	ISIP-Phonemic Awareness	0.21	0.01	0.40
	ISIP-Vocabulary	0.27	0.06	0.45
	FB-Composite	0.00	-0.21	0.21
	FB-Concepts of Print	-0.08	-0.28	0.13
	FB-Onset Sounds	0.05	-0.16	0.26
	FB-Letter Sounds	0.11	-0.10	0.31
	FB-Syllable Reading	-0.05	-0.25	0.16
	IGDI-Picture Naming	0.27	0.07	0.46
	IGDI-Expressive Verbs	0.12	-0.09	0.32
	IGDI-Letter Identification	0.08	-0.13	0.29
	IGDI-Sound Identification	0.01	-0.20	0.22
	IGDI-First Sounds	0.09	-0.12	0.29

Appendix D:

Predictive Correlation Coefficients for Subgroups

Beginning of Year to End of Year

BOY ISIP	EOY Assessment	Overall Coefficient	Coefficient	95% Confidence Interval	
				Lower	Upper

Predictive-related evidence for validity BOY ISIP to EOY Assessment Pre-K Females

Overall

	EOY Assessment	Overall Coefficient	Coefficient	Lower	Upper
	ISIP Overall	0.29	0.15	-0.16	0.43
	ISIP Listening Comprehension	0.23	0.20	-0.11	0.47
	ISIP Phonemic Awareness	0.41	0.28	-0.02	0.54
	ISIP Vocabulary	0.01	-0.08	-0.37	0.23
	FB Composite	0.20	0.20	-0.11	0.47
	FB Concept of Print	0.20	0.07	-0.23	0.37
	FB Onset Sounds	0.20	0.18	-0.13	0.46
	FB Letter Sounds	0.28	0.22	-0.08	0.49
	FB Syllable Reading	0.14	0.13	-0.18	0.41
	IGDI-Picture Naming	0.32	0.36	0.06	0.60
	IGDI-Expressive Verbs	0.29	0.32	0.01	0.57
	IGDI-Letter Identification	0.18	0.11	-0.20	0.40
	IGDI-Sound Identification	0.24	0.15	-0.16	0.43
	IGDI-First Sounds	0.25	0.27	-0.04	0.53

Listening Comprehension

	EOY Assessment	Overall Coefficient	Coefficient	Lower	Upper
	ISIP Overall	0.18	-0.19	-0.47	0.11
	ISIP Listening Comprehension	0.27	0.27	-0.03	0.53
	ISIP Phonemic Awareness	0.29	0.07	-0.24	0.36
	ISIP Vocabulary	-0.03	-0.39	-0.62	-0.10
	FB Composite	0.24	0.38	0.09	0.61
	FB Concept of Print	0.20	0.27	-0.04	0.53
	FB Onset Sounds	0.17	0.38	0.09	0.61
	FB Letter Sounds	0.27	0.33	0.03	0.57
	FB Syllable Reading	0.22	0.28	-0.03	0.53
	IGDI-Picture Naming	0.33	0.13	-0.18	0.42
	IGDI-Expressive Verbs	0.35	0.25	-0.06	0.52
	IGDI-Letter Identification	0.24	0.19	-0.12	0.47
	IGDI-Sound Identification	0.17	0.17	-0.14	0.45
	IGDI-First Sounds	0.32	0.44	0.15	0.65

Phonemic Awareness				
ISIP Overall	0.41	0.28	-0.02	0.54
ISIP Listening Comprehension	0.31	0.20	-0.11	0.47
ISIP Phonemic Awareness	0.53	0.46	0.18	0.67
ISIP Vocabulary	0.07	-0.06	-0.35	0.24
FB Composite	0.39	0.34	0.04	0.58
FB Concept of Print	0.32	0.25	-0.05	0.51
FB Onset Sounds	0.40	0.32	0.02	0.56
FB Letter Sounds	0.45	0.38	0.09	0.61
FB Syllable Reading	0.25	0.20	-0.11	0.47
IGDI-Picture Naming	0.30	0.31	0.00	0.56
IGDI-Expressive Verbs	0.24	0.23	-0.08	0.50
IGDI-Letter Identification	0.29	0.19	-0.12	0.46
IGDI-Sound Identification	0.36	0.18	-0.13	0.46
IGDI-First Sounds	0.32	0.36	0.07	0.60
Vocabulary				
ISIP Overall	0.08	0.00	-0.30	0.30
ISIP Listening Comprehension	0.08	0.14	-0.17	0.42
ISIP Phonemic Awareness	0.15	0.06	-0.24	0.35
ISIP Vocabulary	-0.04	-0.07	-0.36	0.23
FB Composite	-0.04	0.04	-0.27	0.33
FB Concept of Print	0.01	-0.06	-0.36	0.24
FB Onset Sounds	-0.07	0.04	-0.27	0.33
FB Letter Sounds	0.03	0.02	-0.28	0.32
FB Syllable Reading	-0.01	0.04	-0.26	0.34
IGDI-Picture Naming	0.21	0.28	-0.02	0.54
IGDI-Expressive Verbs	0.20	0.26	-0.05	0.52
IGDI-Letter Identification	0.01	0.01	-0.30	0.31
IGDI-Sound Identification	0.03	0.05	-0.26	0.35
IGDI-First Sounds	0.09	0.12	-0.19	0.41

Predictive-related evidence for validity BOY ISIP to EOY Assessment Pre-K Males

BOY ISIP	EOY Assessment	Overall Coefficient	Coefficient	95% Confidence Interval	
				Lower	Upper
Overall					
	ISIP Overall	0.29	0.41	0.09	0.65
	ISIP Listening Comprehension	0.23	0.25	-0.09	0.53
	ISIP Phonemic Awareness	0.41	0.52	0.23	0.72
	ISIP Vocabulary	0.01	0.04	-0.29	0.36
	FB Composite	0.20	0.18	-0.16	0.49
	FB Concept of Print	0.20	0.29	-0.05	0.57
	FB Onset Sounds	0.20	0.33	0.00	0.60
	FB Letter Sounds	0.28	0.11	-0.23	0.43
	FB Syllable Reading	0.14	0.15	-0.19	0.46
	IGDI-Picture Naming	0.32	0.30	-0.03	0.57
	IGDI-Expressive Verbs	0.29	0.27	-0.07	0.55
	IGDI-Letter Identification	0.18	0.20	-0.14	0.49
	IGDI-Sound Identification	0.24	0.33	0.00	0.59
	IGDI-First Sounds	0.25	0.21	-0.13	0.50
Listening Comprehension					
	ISIP Overall	0.18	0.59	0.33	0.77
	ISIP Listening Comprehension	0.27	0.33	0.00	0.59
	ISIP Phonemic Awareness	0.29	0.52	0.23	0.72
	ISIP Vocabulary	-0.03	0.37	0.04	0.62
	FB Composite	0.24	0.11	-0.23	0.43
	FB Concept of Print	0.20	0.15	-0.20	0.46
	FB Onset Sounds	0.17	0.22	-0.12	0.52
	FB Letter Sounds	0.27	0.02	-0.31	0.35
	FB Syllable Reading	0.22	0.14	-0.21	0.45
	IGDI-Picture Naming	0.33	0.51	0.22	0.72
	IGDI-Expressive Verbs	0.35	0.45	0.14	0.68
	IGDI-Letter Identification	0.24	0.31	-0.02	0.58
	IGDI-Sound Identification	0.17	0.18	-0.16	0.48
	IGDI-First Sounds	0.32	0.24	-0.09	0.53
Phonemic Awareness					
	ISIP Overall	0.41	0.51	0.22	0.72

ISIP Listening Comprehension	0.31	0.43	0.12	0.66
ISIP Phonemic Awareness	0.53	0.59	0.32	0.77
ISIP Vocabulary	0.07	0.13	-0.20	0.44
FB Composite	0.39	0.44	0.12	0.67
FB Concept of Print	0.32	0.36	0.03	0.62
FB Onset Sounds	0.40	0.53	0.24	0.73
FB Letter Sounds	0.45	0.46	0.15	0.69
FB Syllable Reading	0.25	0.33	-0.01	0.59
IGDI-Picture Naming	0.30	0.30	-0.03	0.57
IGDI-Expressive Verbs	0.24	0.25	-0.09	0.53
IGDI-Letter Identification	0.29	0.32	0.00	0.59
IGDI-Sound Identification	0.36	0.54	0.25	0.73
IGDI-First Sounds	0.32	0.29	-0.04	0.57
Vocabulary				
ISIP Overall	0.08	0.12	-0.21	0.44
ISIP Listening Comprehension	0.08	-0.06	-0.38	0.28
ISIP Phonemic Awareness	0.15	0.23	-0.11	0.52
ISIP Vocabulary	-0.04	-0.07	-0.39	0.26
FB Composite	-0.04	-0.18	-0.49	0.16
FB Concept of Print	0.01	0.06	-0.28	0.38
FB Onset Sounds	-0.07	-0.02	-0.35	0.31
FB Letter Sounds	0.03	-0.32	-0.59	0.02
FB Syllable Reading	-0.01	-0.11	-0.43	0.23
IGDI-Picture Naming	0.21	0.16	-0.18	0.46
IGDI-Expressive Verbs	0.20	0.14	-0.20	0.45
IGDI-Letter Identification	0.01	-0.04	-0.36	0.30
IGDI-Sound Identification	0.03	-0.03	-0.35	0.31
IGDI-First Sounds	0.09	0.01	-0.32	0.34

Predictive-related evidence for validity BOY ISIP to EOY Assessment Pre-K Free/Reduced Lunch

BOY ISIP	EOY Assessment	Overall Coefficient	Coefficient	95% Confidence Interval	
				Lower	Upper
Overall					
	ISIP Overall	0.29	0.36	0.13	0.55
	ISIP Listening Comprehension	0.23	0.26	0.02	0.47
	ISIP Phonemic Awareness	0.41	0.44	0.23	0.61
	ISIP Vocabulary	0.01	0.06	-0.18	0.30
	FB Composite	0.20	0.23	-0.01	0.45
	FB Concept of Print	0.20	0.19	-0.05	0.41
	FB Onset Sounds	0.20	0.27	0.03	0.48
	FB Letter Sounds	0.28	0.20	-0.05	0.42
	FB Syllable Reading	0.14	0.20	-0.05	0.42
	IGDI-Picture Naming	0.32	0.30	0.06	0.50
	IGDI-Expressive Verbs	0.29	0.27	0.03	0.48
	IGDI-Letter Identification	0.18	0.14	-0.10	0.37
	IGDI-Sound Identification	0.24	0.25	0.01	0.46
	IGDI-First Sounds	0.25	0.26	0.02	0.47
Listening Comprehension					
	ISIP Overall	0.18	0.25	0.01	0.46
	ISIP Listening Comprehension	0.27	0.26	0.02	0.47
	ISIP Phonemic Awareness	0.29	0.33	0.10	0.53
	ISIP Vocabulary	-0.03	0.01	-0.22	0.25
	FB Composite	0.24	0.26	0.02	0.47
	FB Concept of Print	0.20	0.15	-0.09	0.38
	FB Onset Sounds	0.17	0.24	0.00	0.46
	FB Letter Sounds	0.27	0.15	-0.09	0.38
	FB Syllable Reading	0.22	0.27	0.03	0.48
	IGDI-Picture Naming	0.33	0.37	0.14	0.56
	IGDI-Expressive Verbs	0.35	0.42	0.20	0.60
	IGDI-Letter Identification	0.24	0.20	-0.04	0.42
	IGDI-Sound Identification	0.17	0.07	-0.17	0.31
	IGDI-First Sounds	0.32	0.28	0.04	0.49
Phonemic Awareness					

ISIP Overall	0.41	0.44	0.23	0.62
ISIP Listening Comprehension	0.31	0.31	0.08	0.51
ISIP Phonemic Awareness	0.53	0.55	0.35	0.69
ISIP Vocabulary	0.07	0.07	-0.17	0.30
FB Composite	0.39	0.35	0.12	0.55
FB Concept of Print	0.32	0.27	0.04	0.48
FB Onset Sounds	0.40	0.38	0.16	0.57
FB Letter Sounds	0.45	0.34	0.11	0.54
FB Syllable Reading	0.25	0.26	0.02	0.47
IGDI-Picture Naming	0.30	0.29	0.05	0.49
IGDI-Expressive Verbs	0.24	0.24	0.00	0.45
IGDI-Letter Identification	0.29	0.22	-0.03	0.43
IGDI-Sound Identification	0.36	0.33	0.09	0.53
IGDI-First Sounds	0.32	0.30	0.07	0.51
Vocabulary				
ISIP Overall	0.08	0.17	-0.07	0.39
ISIP Listening Comprehension	0.08	0.13	-0.12	0.35
ISIP Phonemic Awareness	0.15	0.20	-0.04	0.42
ISIP Vocabulary	-0.04	0.05	-0.20	0.28
FB Composite	-0.04	0.04	-0.20	0.28
FB Concept of Print	0.01	0.04	-0.20	0.28
FB Onset Sounds	-0.07	0.09	-0.15	0.32
FB Letter Sounds	0.03	-0.01	-0.25	0.23
FB Syllable Reading	-0.01	0.07	-0.17	0.30
IGDI-Picture Naming	0.21	0.20	-0.04	0.42
IGDI-Expressive Verbs	0.20	0.18	-0.07	0.40
IGDI-Letter Identification	0.01	0.02	-0.22	0.26
IGDI-Sound Identification	0.03	0.09	-0.16	0.32
IGDI-First Sounds	0.09	0.12	-0.12	0.35

Predictive-related evidence for validity BOY ISIP to EOY Assessment Pre-K Not Free/Reduced Lunch

BOY ISIP	EOY Assessment	Overall Coefficient	Coefficient	95% Confidence Interval	
				Lower	Upper
Overall					
	ISIP Overall	0.29	0.05	-0.57	0.63
	ISIP Listening Comprehension	0.23	0.08	-0.55	0.65
	ISIP Phonemic Awareness	0.41	0.28	-0.38	0.75
	ISIP Vocabulary	0.01	-0.21	-0.72	0.45
	FB Composite	0.20	-0.06	-0.64	0.56
	FB Concept of Print	0.20	0.20	-0.45	0.71
	FB Onset Sounds	0.20	0.27	-0.39	0.75
	FB Letter Sounds	0.28	0.14	-0.50	0.68
	FB Syllable Reading	0.14	-0.35	-0.79	0.31
	IGDI-Picture Naming	0.32	0.68	0.13	0.91
	IGDI-Expressive Verbs	0.29	0.50	-0.14	0.85
	IGDI-Letter Identification	0.18	0.44	-0.22	0.82
	IGDI-Sound Identification	0.24	0.07	-0.55	0.64
	IGDI-First Sounds	0.25	0.10	-0.53	0.66
Listening Comprehension					
	ISIP Overall	0.18	0.05	-0.56	0.63
	ISIP Listening Comprehension	0.27	0.43	-0.23	0.82
	ISIP Phonemic Awareness	0.29	0.22	-0.44	0.72
	ISIP Vocabulary	-0.03	-0.13	-0.68	0.51
	FB Composite	0.24	0.03	-0.58	0.62
	FB Concept of Print	0.20	0.35	-0.32	0.78
	FB Onset Sounds	0.17	0.28	-0.38	0.75
	FB Letter Sounds	0.27	0.11	-0.53	0.66
	FB Syllable Reading	0.22	-0.13	-0.68	0.51
	IGDI-Picture Naming	0.33	0.15	-0.50	0.69
	IGDI-Expressive Verbs	0.35	-0.26	-0.74	0.41
	IGDI-Letter Identification	0.24	0.43	-0.23	0.82
	IGDI-Sound Identification	0.17	0.65	0.08	0.90
	IGDI-First Sounds	0.32	0.46	-0.20	0.83
Phonemic Awareness					
	ISIP Overall	0.41	0.43	-0.23	0.82

ISIP Listening Comprehension	0.31	0.32	-0.34	0.77
ISIP Phonemic Awareness	0.53	0.54	-0.09	0.86
ISIP Vocabulary	0.07	0.17	-0.48	0.70
FB Composite	0.39	0.49	-0.16	0.84
FB Concept of Print	0.32	0.58	-0.03	0.87
FB Onset Sounds	0.40	0.75	0.28	0.93
FB Letter Sounds	0.45	0.63	0.06	0.89
FB Syllable Reading	0.25	0.15	-0.49	0.69
IGDI-Picture Naming	0.30	0.51	-0.13	0.85
IGDI-Expressive Verbs	0.24	0.20	-0.46	0.71
IGDI-Letter Identification	0.29	0.74	0.24	0.93
IGDI-Sound Identification	0.36	0.52	-0.11	0.85
IGDI-First Sounds	0.32	0.33	-0.34	0.78
Vocabulary				
ISIP Overall	0.08	-0.37	-0.79	0.30
ISIP Listening Comprehension	0.08	-0.19	-0.71	0.47
ISIP Phonemic Awareness	0.15	-0.13	-0.68	0.51
ISIP Vocabulary	-0.04	-0.47	-0.83	0.18
FB Composite	-0.04	-0.56	-0.87	0.06
FB Concept of Print	0.01	-0.25	-0.74	0.41
FB Onset Sounds	-0.07	-0.32	-0.77	0.35
FB Letter Sounds	0.03	-0.42	-0.81	0.24
FB Syllable Reading	-0.01	-0.65	-0.90	-0.08
IGDI-Picture Naming	0.21	0.48	-0.17	0.84
IGDI-Expressive Verbs	0.20	0.50	-0.15	0.84
IGDI-Letter Identification	0.01	-0.06	-0.64	0.56
IGDI-Sound Identification	0.03	-0.38	-0.80	0.29
IGDI-First Sounds	0.09	-0.15	-0.69	0.50

Middle of Year to End of Year

Predictive-related evidence for validity MOY ISIP to EOY Assessment Pre-K Females

MOY ISIP	EOY Assessment	Overall Coefficient	Coefficient	95% Confidence Interval	
				Lower	Upper
Overall					
	ISIP-Overall	0.37	0.35	0.07	0.58
	ISIP-Listening Comprehension	0.31	0.16	-0.13	0.43
	ISIP-Phonemic Awareness	0.39	0.39	0.12	0.61
	ISIP-Vocabulary	0.24	0.19	-0.10	0.45
	FB-Composite	0.21	0.28	-0.01	0.52
	FB-Concepts of Print	0.15	0.16	-0.13	0.43
	FB-Onset Sounds	0.25	0.16	-0.14	0.42
	FB-Letter Sounds	0.30	0.37	0.09	0.60
	FB-Syllable Reading	0.11	0.14	-0.15	0.41
	IGDI-Picture Naming	0.36	0.24	-0.06	0.49
	IGDI-Expressive Verbs	0.24	0.23	-0.07	0.48
	IGDI-Letter Identification	0.28	0.11	-0.19	0.39
	IGDI-Sound Identification	0.21	0.08	-0.21	0.37
	IGDI-First Sounds	0.22	0.29	0.00	0.54
Listening Comprehension					
	ISIP-Overall	0.48	0.20	-0.09	0.46
	ISIP-Listening Comprehension	0.56	0.44	0.17	0.64
	ISIP-Phonemic Awareness	0.43	0.26	-0.03	0.51
	ISIP-Vocabulary	0.38	0.07	-0.22	0.35
	FB-Composite	0.16	0.16	-0.13	0.43
	FB-Concepts of Print	0.22	0.18	-0.11	0.45
	FB-Onset Sounds	0.13	0.16	-0.13	0.43
	FB-Letter Sounds	0.22	0.13	-0.16	0.41
	FB-Syllable Reading	0.10	0.13	-0.16	0.40
	IGDI-Picture Naming	0.17	0.15	-0.15	0.42

IGDI-Expressive Verbs	0.27	0.35	0.07	0.58
IGDI-Letter Identification	0.22	0.10	-0.19	0.38
IGDI-Sound Identification	0.13	0.20	-0.10	0.46
IGDI-First Sounds	0.12	0.23	-0.07	0.48
Phonemic Awareness				
ISIP-Overall	0.25	0.28	-0.01	0.53
ISIP-Listening Comprehension	0.22	0.14	-0.15	0.41
ISIP-Phonemic Awareness	0.38	0.36	0.08	0.59
ISIP-Vocabulary	0.07	0.11	-0.19	0.38
FB-Composite	0.33	0.43	0.16	0.64
FB-Concepts of Print	0.32	0.30	0.01	0.54
FB-Onset Sounds	0.33	0.32	0.03	0.55
FB-Letter Sounds	0.33	0.49	0.24	0.68
FB-Syllable Reading	0.22	0.26	-0.03	0.51
IGDI-Picture Naming	0.26	0.25	-0.04	0.51
IGDI-Expressive Verbs	0.24	0.42	0.15	0.64
IGDI-Letter Identification	0.35	0.36	0.08	0.59
IGDI-Sound Identification	0.31	0.27	-0.03	0.52
IGDI-First Sounds	0.24	0.30	0.01	0.55
Vocabulary				
ISIP-Overall	0.29	0.18	-0.12	0.44
ISIP-Listening Comprehension	0.24	0.06	-0.23	0.35
ISIP-Phonemic Awareness	0.21	0.15	-0.14	0.42
ISIP-Vocabulary	0.27	0.14	-0.16	0.41
FB-Composite	0.00	-0.05	-0.33	0.24
FB-Concepts of Print	-0.08	-0.07	-0.35	0.22
FB-Onset Sounds	0.05	-0.09	-0.37	0.20
FB-Letter Sounds	0.11	0.01	-0.28	0.30
FB-Syllable Reading	-0.05	-0.05	-0.34	0.24
IGDI-Picture Naming	0.27	0.07	-0.23	0.35
IGDI-Expressive Verbs	0.12	-0.10	-0.38	0.20
IGDI-Letter Identification	0.08	-0.19	-0.45	0.11
IGDI-Sound Identification	0.01	-0.13	-0.41	0.16
IGDI-First Sounds	0.09	0.09	-0.21	0.37

Predictive-related evidence for validity MOY ISIP to EOY Assessment Pre-K Males

MOY ISIP	EOY Assessment	Overall Coefficient	Coefficient	95% Confidence Interval	
				Lower	Upper
Overall					
	ISIP-Overall	0.37	0.39	0.11	0.62
	ISIP-Listening Comprehension	0.31	0.45	0.17	0.66
	ISIP-Phonemic Awareness	0.39	0.41	0.12	0.63
	ISIP-Vocabulary	0.24	0.26	-0.04	0.52
	FB-Composite	0.21	0.14	-0.18	0.42
	FB-Concepts of Print	0.15	0.13	-0.18	0.41
	FB-Onset Sounds	0.25	0.37	0.08	0.61
	FB-Letter Sounds	0.30	0.11	-0.20	0.40
	FB-Syllable Reading	0.11	0.08	-0.23	0.38
	IGDI-Picture Naming	0.36	0.48	0.21	0.68
	IGDI-Expressive Verbs	0.24	0.26	-0.05	0.52
	IGDI-Letter Identification	0.28	0.37	0.08	0.60
	IGDI-Sound Identification	0.21	0.32	0.02	0.56
	IGDI-First Sounds	0.22	0.13	-0.18	0.42
Listening Comprehension					
	ISIP-Overall	0.48	0.66	0.45	0.80
	ISIP-Listening Comprehension	0.56	0.65	0.43	0.79
	ISIP-Phonemic Awareness	0.43	0.54	0.28	0.72
	ISIP-Vocabulary	0.38	0.56	0.31	0.74
	FB-Composite	0.16	0.09	-0.22	0.38
	FB-Concepts of Print	0.22	0.24	-0.07	0.51
	FB-Onset Sounds	0.13	0.21	-0.10	0.48
	FB-Letter Sounds	0.22	0.03	-0.28	0.33
	FB-Syllable Reading	0.10	0.05	-0.25	0.35
	IGDI-Picture Naming	0.17	0.23	-0.07	0.50
	IGDI-Expressive Verbs	0.27	0.21	-0.10	0.48
	IGDI-Letter Identification	0.22	0.28	-0.02	0.53
	IGDI-Sound Identification	0.13	0.00	-0.30	0.30
	IGDI-First Sounds	0.12	-0.04	-0.34	0.26
Phonemic Awareness					
	ISIP-Overall	0.25	0.24	-0.07	0.50

ISIP-Listening Comprehension	0.22	0.30	0.00	0.55
ISIP-Phonemic Awareness	0.38	0.40	0.12	0.63
ISIP-Vocabulary	0.07	0.03	-0.27	0.33
FB-Composite	0.33	0.19	-0.12	0.47
FB-Concepts of Print	0.32	0.32	0.02	0.57
FB-Onset Sounds	0.33	0.32	0.02	0.57
FB-Letter Sounds	0.33	0.09	-0.22	0.39
FB-Syllable Reading	0.22	0.18	-0.13	0.46
IGDI-Picture Naming	0.26	0.30	0.00	0.55
IGDI-Expressive Verbs	0.24	0.08	-0.22	0.37
IGDI-Letter Identification	0.35	0.32	0.02	0.56
IGDI-Sound Identification	0.31	0.34	0.05	0.58
IGDI-First Sounds	0.24	0.15	-0.16	0.43
Vocabulary				
ISIP-Overall	0.29	0.40	0.11	0.62
ISIP-Listening Comprehension	0.24	0.43	0.15	0.65
ISIP-Phonemic Awareness	0.21	0.27	-0.03	0.53
ISIP-Vocabulary	0.27	0.38	0.09	0.61
FB-Composite	0.00	0.04	-0.27	0.34
FB-Concepts of Print	-0.08	-0.10	-0.39	0.21
FB-Onset Sounds	0.05	0.30	-0.01	0.55
FB-Letter Sounds	0.11	0.09	-0.22	0.38
FB-Syllable Reading	-0.05	-0.04	-0.34	0.27
IGDI-Picture Naming	0.27	0.48	0.21	0.68
IGDI-Expressive Verbs	0.12	0.33	0.03	0.57
IGDI-Letter Identification	0.08	0.29	-0.01	0.54
IGDI-Sound Identification	0.01	0.18	-0.12	0.46
IGDI-First Sounds	0.09	0.07	-0.23	0.36

Predictive-related evidence for validity MOY ISIP to EOY Assessment Pre-K Free/Reduced Lunch

MOY ISIP	EOY Assessment	Overall Coefficient	Coefficient	95% Confidence Interval	
				Lower	Upper
Overall					
	ISIP-Overall	0.37	0.40	0.19	0.57
	ISIP-Listening Comprehension	0.31	0.32	0.11	0.51
	ISIP-Phonemic Awareness	0.39	0.40	0.19	0.57
	ISIP-Vocabulary	0.24	0.27	0.05	0.46
	FB-Composite	0.21	0.17	-0.05	0.38
	FB-Concepts of Print	0.15	0.09	-0.13	0.31
	FB-Onset Sounds	0.25	0.25	0.03	0.44
	FB-Letter Sounds	0.30	0.23	0.00	0.43
	FB-Syllable Reading	0.11	0.07	-0.15	0.29
	IGDI-Picture Naming	0.36	0.38	0.17	0.55
	IGDI-Expressive Verbs	0.24	0.24	0.02	0.44
	IGDI-Letter Identification	0.28	0.29	0.07	0.48
	IGDI-Sound Identification	0.21	0.23	0.01	0.43
	IGDI-First Sounds	0.22	0.20	-0.02	0.41
Listening Comprehension					
	ISIP-Overall	0.48	0.53	0.36	0.68
	ISIP-Listening Comprehension	0.56	0.54	0.36	0.68
	ISIP-Phonemic Awareness	0.43	0.44	0.24	0.60
	ISIP-Vocabulary	0.38	0.44	0.24	0.60
	FB-Composite	0.16	0.20	-0.02	0.41
	FB-Concepts of Print	0.22	0.21	-0.01	0.42
	FB-Onset Sounds	0.13	0.22	0.00	0.42
	FB-Letter Sounds	0.22	0.18	-0.05	0.38
	FB-Syllable Reading	0.10	0.14	-0.08	0.36
	IGDI-Picture Naming	0.17	0.16	-0.06	0.37
	IGDI-Expressive Verbs	0.27	0.32	0.10	0.51
	IGDI-Letter Identification	0.22	0.23	0.01	0.43
	IGDI-Sound Identification	0.13	0.12	-0.10	0.33
	IGDI-First Sounds	0.12	0.08	-0.14	0.30
Phonemic Awareness					
	ISIP-Overall	0.25	0.25	0.03	0.45

ISIP-Listening Comprehension	0.22	0.20	-0.02	0.41
ISIP-Phonemic Awareness	0.38	0.34	0.13	0.53
ISIP-Vocabulary	0.07	0.09	-0.14	0.30
FB-Composite	0.33	0.26	0.04	0.45
FB-Concepts of Print	0.32	0.25	0.03	0.45
FB-Onset Sounds	0.33	0.24	0.01	0.43
FB-Letter Sounds	0.33	0.24	0.02	0.44
FB-Syllable Reading	0.22	0.20	-0.03	0.40
IGDI-Picture Naming	0.26	0.26	0.04	0.46
IGDI-Expressive Verbs	0.24	0.24	0.02	0.44
IGDI-Letter Identification	0.35	0.34	0.12	0.52
IGDI-Sound Identification	0.31	0.31	0.09	0.50
IGDI-First Sounds	0.24	0.19	-0.03	0.40
Vocabulary				
ISIP-Overall	0.29	0.33	0.12	0.52
ISIP-Listening Comprehension	0.24	0.27	0.05	0.46
ISIP-Phonemic Awareness	0.21	0.25	0.03	0.45
ISIP-Vocabulary	0.27	0.29	0.08	0.48
FB-Composite	0.00	0.01	-0.21	0.24
FB-Concepts of Print	-0.08	-0.09	-0.30	0.14
FB-Onset Sounds	0.05	0.14	-0.09	0.35
FB-Letter Sounds	0.11	0.11	-0.12	0.32
FB-Syllable Reading	-0.05	-0.07	-0.29	0.15
IGDI-Picture Naming	0.27	0.30	0.08	0.49
IGDI-Expressive Verbs	0.12	0.13	-0.09	0.34
IGDI-Letter Identification	0.08	0.12	-0.11	0.33
IGDI-Sound Identification	0.01	0.06	-0.17	0.28
IGDI-First Sounds	0.09	0.12	-0.10	0.33

Predictive-related evidence for validity MOY ISIP to EOY Assessment Pre-K Not Free/Reduced Lunch

MOY ISIP	EOY Assessment	Overall Coefficient	Coefficient	95% Confidence Interval	
				Lower	Upper
Overall					
	ISIP-Overall	0.37	0.29	-0.38	0.76
	ISIP-Listening Comprehension	0.31	0.25	-0.41	0.74
	ISIP-Phonemic Awareness	0.39	0.44	-0.21	0.82
	ISIP-Vocabulary	0.24	0.03	-0.58	0.62
	FB-Composite	0.21	0.66	0.10	0.90
	FB-Concepts of Print	0.15	0.74	0.26	0.93
	FB-Onset Sounds	0.25	0.88	0.60	0.97
	FB-Letter Sounds	0.30	0.59	-0.01	0.88
	FB-Syllable Reading	0.11	0.50	-0.15	0.84
	IGDI-Picture Naming	0.36	0.23	-0.43	0.73
	IGDI-Expressive Verbs	0.24	0.24	-0.42	0.74
	IGDI-Letter Identification	0.28	0.23	-0.43	0.73
	IGDI-Sound Identification	0.21	0.07	-0.55	0.65
	IGDI-First Sounds	0.22	0.54	-0.09	0.86
Listening Comprehension					
	ISIP-Overall	0.48	-0.09	-0.65	0.54
	ISIP-Listening Comprehension	0.56	0.56	-0.06	0.87
	ISIP-Phonemic Awareness	0.43	0.19	-0.47	0.71
	ISIP-Vocabulary	0.38	-0.33	-0.78	0.34
	FB-Composite	0.16	-0.02	-0.62	0.58
	FB-Concepts of Print	0.22	0.43	-0.22	0.82
	FB-Onset Sounds	0.13	0.41	-0.26	0.81
	FB-Letter Sounds	0.22	-0.03	-0.62	0.58
	FB-Syllable Reading	0.10	-0.16	-0.69	0.49
	IGDI-Picture Naming	0.17	0.29	-0.37	0.76
	IGDI-Expressive Verbs	0.27	-0.16	-0.69	0.49
	IGDI-Letter Identification	0.22	0.23	-0.43	0.73
	IGDI-Sound Identification	0.13	0.29	-0.38	0.76
	IGDI-First Sounds	0.12	0.67	0.11	0.91
Phonemic Awareness					
	ISIP-Overall	0.25	0.54	-0.09	0.86

ISIP-Listening Comprehension	0.22	0.43	-0.23	0.82
ISIP-Phonemic Awareness	0.38	0.72	0.21	0.92
ISIP-Vocabulary	0.07	0.16	-0.49	0.69
FB-Composite	0.33	0.69	0.15	0.91
FB-Concepts of Print	0.32	0.72	0.21	0.92
FB-Onset Sounds	0.33	0.88	0.60	0.97
FB-Letter Sounds	0.33	0.75	0.28	0.93
FB-Syllable Reading	0.22	0.37	-0.29	0.80
IGDI-Picture Naming	0.26	0.44	-0.21	0.82
IGDI-Expressive Verbs	0.24	0.22	-0.44	0.72
IGDI-Letter Identification	0.35	0.38	-0.28	0.80
IGDI-Sound Identification	0.31	0.23	-0.43	0.73
IGDI-First Sounds	0.24	0.53	-0.10	0.86
Vocabulary				
ISIP-Overall	0.29	-0.32	-0.77	0.35
ISIP-Listening Comprehension	0.24	-0.21	-0.72	0.45
ISIP-Phonemic Awareness	0.21	-0.30	-0.76	0.37
ISIP-Vocabulary	0.27	-0.23	-0.73	0.43
FB-Composite	0.00	0.25	-0.41	0.74
FB-Concepts of Print	-0.08	0.38	-0.29	0.80
FB-Onset Sounds	0.05	0.40	-0.26	0.81
FB-Letter Sounds	0.11	-0.02	-0.61	0.59
FB-Syllable Reading	-0.05	0.45	-0.21	0.82
IGDI-Picture Naming	0.27	-0.29	-0.76	0.37
IGDI-Expressive Verbs	0.12	0.16	-0.49	0.69
IGDI-Letter Identification	0.08	-0.17	-0.70	0.48
IGDI-Sound Identification	0.01	-0.25	-0.74	0.41
IGDI-First Sounds	0.09	0.26	-0.40	0.75