

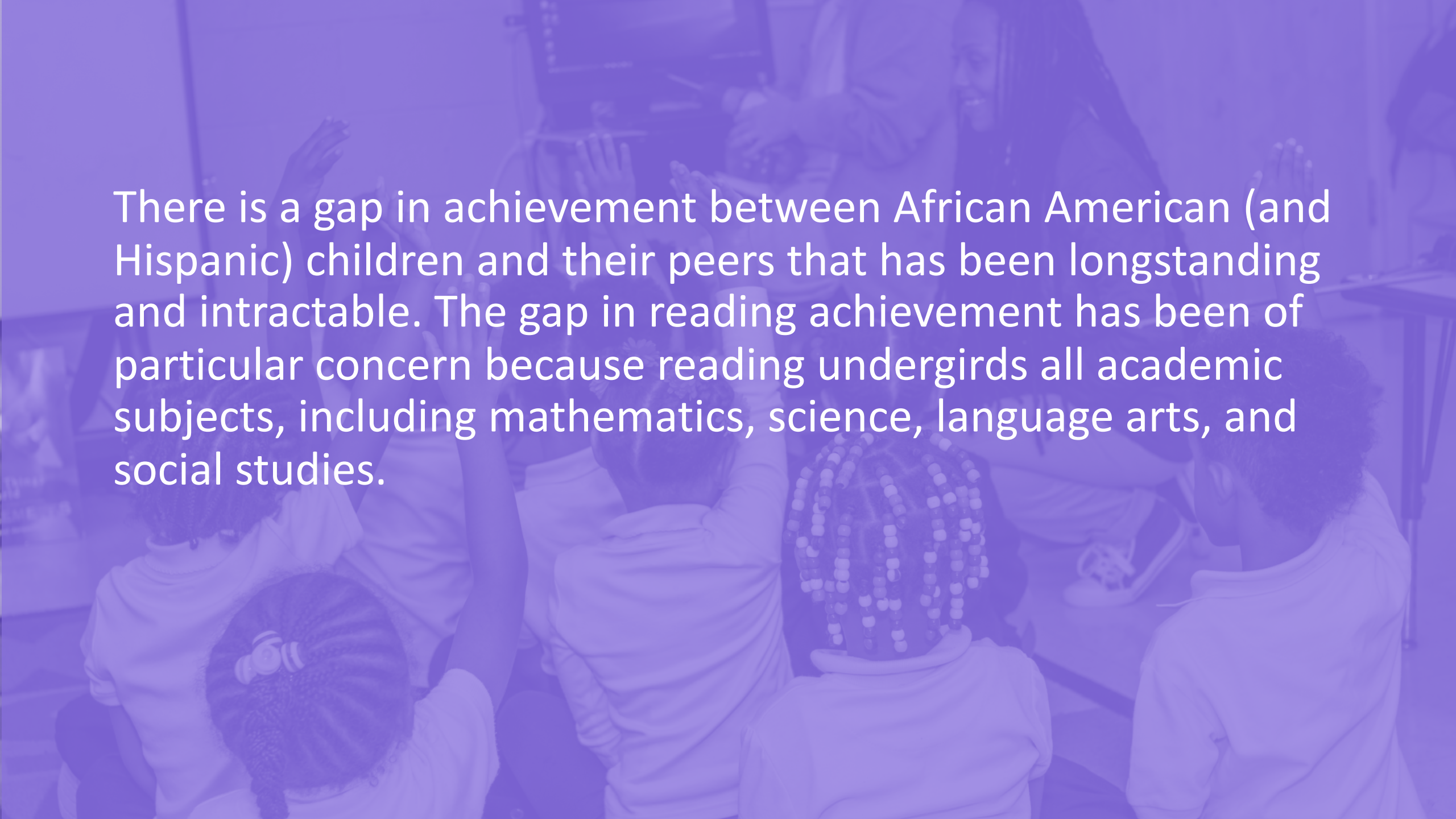
Intersectionality of Poverty, Literacy and Dialectal Variation: Consequences for Assessment of Language and Literacy

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PNW Neuropsych Society

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A photograph of a classroom scene, overlaid with a semi-transparent blue filter. A teacher is standing at the front, smiling and looking towards a group of students. Several students are sitting at desks, with their hands raised in the air, indicating an interactive or questioning session. The background shows classroom furniture like desks and a whiteboard.

There is a gap in achievement between African American (and Hispanic) children and their peers that has been longstanding and intractable. The gap in reading achievement has been of particular concern because reading undergirds all academic subjects, including mathematics, science, language arts, and social studies.

The National Landscape

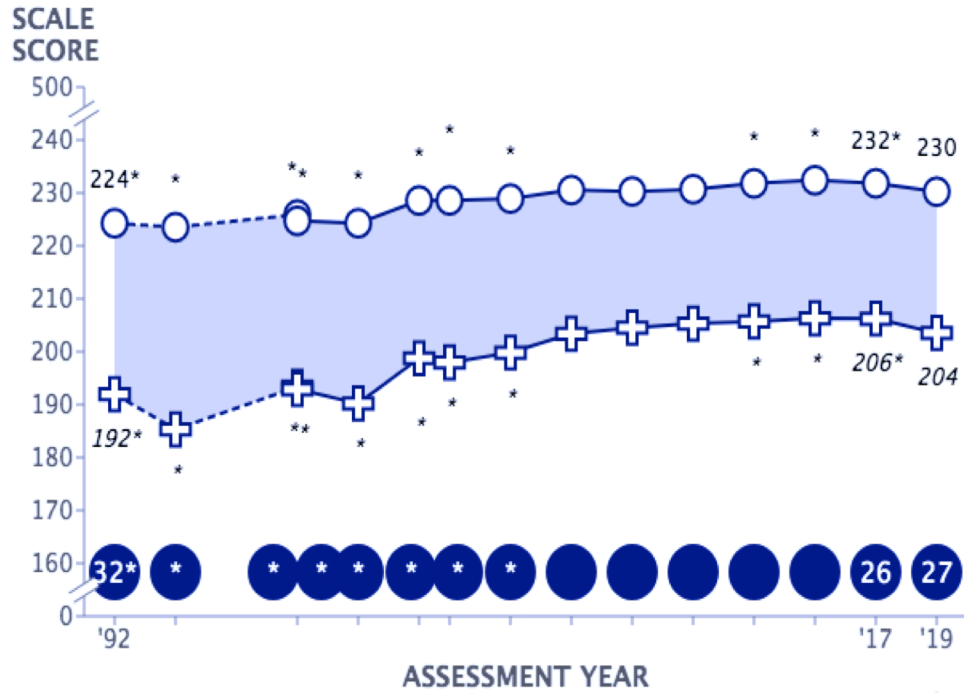
- The 25-30 point reading gap between AA and Caucasian American children as measured on the National Assessment of Education Progress (NAEP) has remained virtually unchanged for the last decade.
- The majority (86%) of AA fourth grade students read at or below “basic” levels in the 2016 NAEP sample,
- Only 14% of AA children were considered proficient or advanced readers (NCES, 2016).

NAEP (2019)

- The 27-point score difference between White and Black students **was not significantly different** compared to 2017, the previous assessment year; however, it was smaller than the 32-point gap in 1992, the first assessment year

(www.nces.gov)

Trend in fourth-grade NAEP reading average scores and score gaps, by race/ethnicity



- White
- ⊕ Black
- - - Accommodations not permitted
- Accommodations permitted
- Significant difference (p < .05)
- * Significantly different (p < .05) from 2019.

< Drag to change focal years >

'19

Reading failure in African American (AA) children is a longstanding high impact **public health concern** of enormous societal concern

At this point this failure is less about skills, and abilities and achievement, and more about **access**

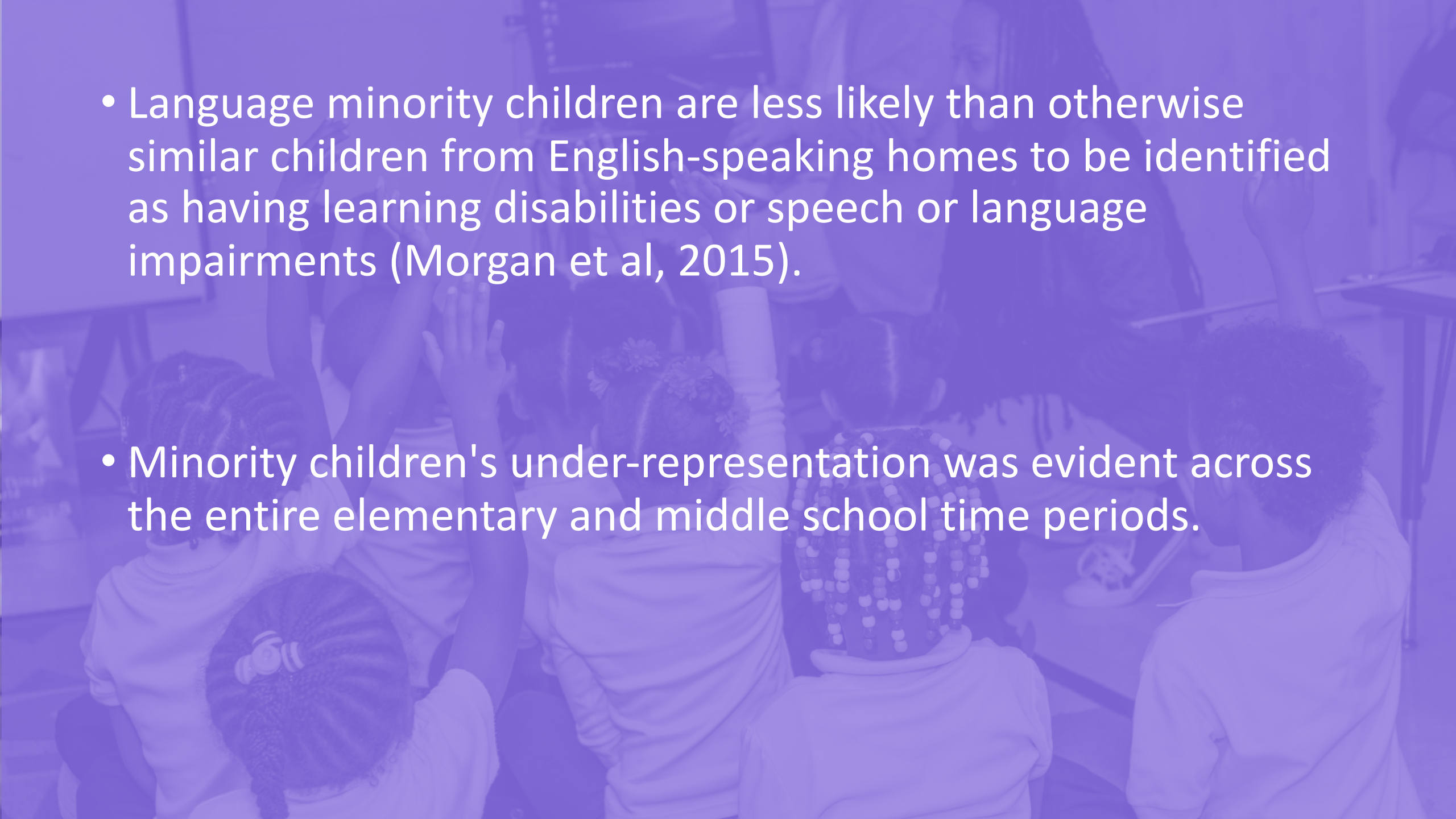


Consequences are significant...

- For every year that these students are in school the disparity in school achievement reportedly increases by one-tenth of a standard deviation, and this is particularly true of students from low-income families (Burchinal et al., 2011).
- That is, the longer these students are in school the larger the gap seems to grow

And Yet...

- AA and other minority students are underrepresented in Special Education:
- Morgan et al (2015): *racial, ethnic, and language minority elementary- and middle-school students are less likely than otherwise similar white, English-speaking children to be identified as having disabilities and, as a result, are disproportionately underrepresented in special education.*

- 
- A photograph of a classroom scene, overlaid with a semi-transparent purple filter. A teacher is visible in the background, and several students in the foreground have their hands raised, indicating an interactive learning environment. The text is overlaid on the upper and middle portions of the image.
- Language minority children are less likely than otherwise similar children from English-speaking homes to be identified as having learning disabilities or speech or language impairments (Morgan et al, 2015).
 - Minority children's under-representation was evident across the entire elementary and middle school time periods.



Importantly...

The exclusionary criteria for LD nationally restricts children from diagnosis whose learning problems are “...primarily the result of... environmental, cultural, or economic disadvantage.”

(IDEA, 2004)

So currently in the U.S. it is not possible to be both poor and have LD. If you're poor and you can't read it is assumed that you can't read because you are poor.

Impact of Cultural Language Differences

- It has been hypothesized that the mismatch between the language system spoken at home and the one used at school increases the cognitive load for students who speak other languages or dialects of English, making the process of learning to read much harder.
- Also, the linguistic characteristics of cultural-dialect among African American children significantly overlap with the characteristics of language impairment (LI) making it difficult to distinguish language difference from language disorder.



Impact of dialect use on a basic component of learning to read

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Can some black-white differences in reading achievement be traced to differences in language background? Many African American children speak a dialect that differs from the mainstream dialect emphasized in school. We examined how use of alternative dialects affects decoding, an important component of early reading and marker of reading development. Behavioral data show that use of the alternative pronunciations of words in different dialects affects reading aloud in developing readers, with larger effects for children who use more African American English (AAE). Mechanisms underlying this effect were explored with a computational model, investigating factors affecting reading acquisition. The results indicate that the achievement gap may be due in part to differences in task complexity: children whose home and school dialects differ are at greater risk for reading difficulties because tasks such as learning to decode are more complex for them.

Keywords: reading, dialect, African American English, achievement gap

- Spelling-sound mappings were learned more slowly in the MAE-Mismatch condition than in the MAE-Match condition due to DS (contrastive) words (e.g., *best*).
- That is, having learned the AAE pronunciations the model had difficulty learning to generate the MAE form /bɛst/ in reading.
- Penalty was significant: 350 training trials to 75% accuracy for dialect neutral words; 1000 training trials for dialect sensitive words.

What is African American English??

- A systematic, rule-governed variation of English
- Used by most (but not all) African Americans in the United States
- Developed as an oral language with no written counterpart
- A low prestige dialect whose legitimacy is still debated in some circles: a community language that is not spoken at school

A photograph of a classroom scene, overlaid with a semi-transparent blue filter. A teacher with long dark hair is leaning forward, smiling, and interacting with a group of students. Several students have their hands raised in the air, indicating an active learning environment. The students are seen from behind, and their hair is styled in various ways, including braids and beaded headpieces. The overall atmosphere is positive and collaborative.

What does it do?

African American English

AAE adds and deletes bound morphemes

- Zero Possessive
- Zero Past Tense
- Zero Plural
- Third person singular -s
- I ride in my brother car
- And then he fix___ the food
- A girl puttin' some glass_ on the table.
- Sometimes she wear___ a baseball cap.

Transforms the main verb or verb phrase

- Deletion of the copula/auxiliary
 - He ___ runnin' fast
 - He ___ hungry.
- Subject-Verb Agreement
 - They *was* lookin' for the big dog.
- Habitual *be*
 - He *be* gettin' some ice cream
- Remote past *been*
 - I *been* knowin' how to swim.

Pronominal Differences

- Undifferentiated pronoun case
- Regularized reflexive
- Appositive Pronoun
- Them pullin' them up the hill.”
- He hurt hisself when he fell off his bike
- My mama she took me to the movies

“Other”

- Fitna/sposeta/bouta
(communicates
imminent action)
 - Multiple negation
 - Double modal
- I’m fitna go outside.
 - I’m bouta ride my bike)
 - He ain’t never got no
candy no how.
 - I’m am going to see if I
can go.

The Sound System also is impacted

- f /θ , v/ð and t/ θ in intervocalic and postvocalic positions
- d/ð in prevocalic positions
- Consonant cluster reduction
- *Wif/with; bave/bathe; wit/with*
- *Dis/this; dem/them*
- *Col-/cold*

Description of our Sample

- Nearly evenly split by gender (girls = 437, boys = 394).
- All participants had normal nonverbal intelligence ($M = 96.94$; $SD = 15.47$)
- Children with an active IEP were excluded.
- A longitudinal, accelerated cohort design was used to measure language and reading across 1st through 5th grades.

Assessment Battery

Reading	Language	Dialect
WJ-IV	TOLD	DELV-ST
<ul style="list-style-type: none">• Reading Vocab• Word Attack• Reading Fluency• Passage Comp• Letter-Word ID	<p><u>1st & 2nd grade:</u></p> <ul style="list-style-type: none">• Syntactic Understanding• Picture Vocabulary• Morphological Completion <p><u>3rd, 4th, & 5th grade:</u></p> <ul style="list-style-type: none">• Sentence Combining• Picture Vocabulary• Morphological Comprehension	<p>Degree of Language Variation</p> <p>calculated for each child based on responses to 15 items with specific phonological and syntactic targets</p>

The background of the slide features a row of ten stylized, semi-transparent blue silhouettes of women in various professional outfits, including blouses, jackets, dresses, and skirts. They are arranged in a slightly staggered line across the width of the slide. The text 'What have we found?' is centered over this background in a white, sans-serif font.

What have we found?

Washington, Branum-Martin, Sun and Lee-James, 2018

- In first grade dialect density was approximately 65% (SD = 26%), followed by a nearly linear decrease in dialect density through fifth grade (about 5% per year), with a slight slowing of the trajectory over time

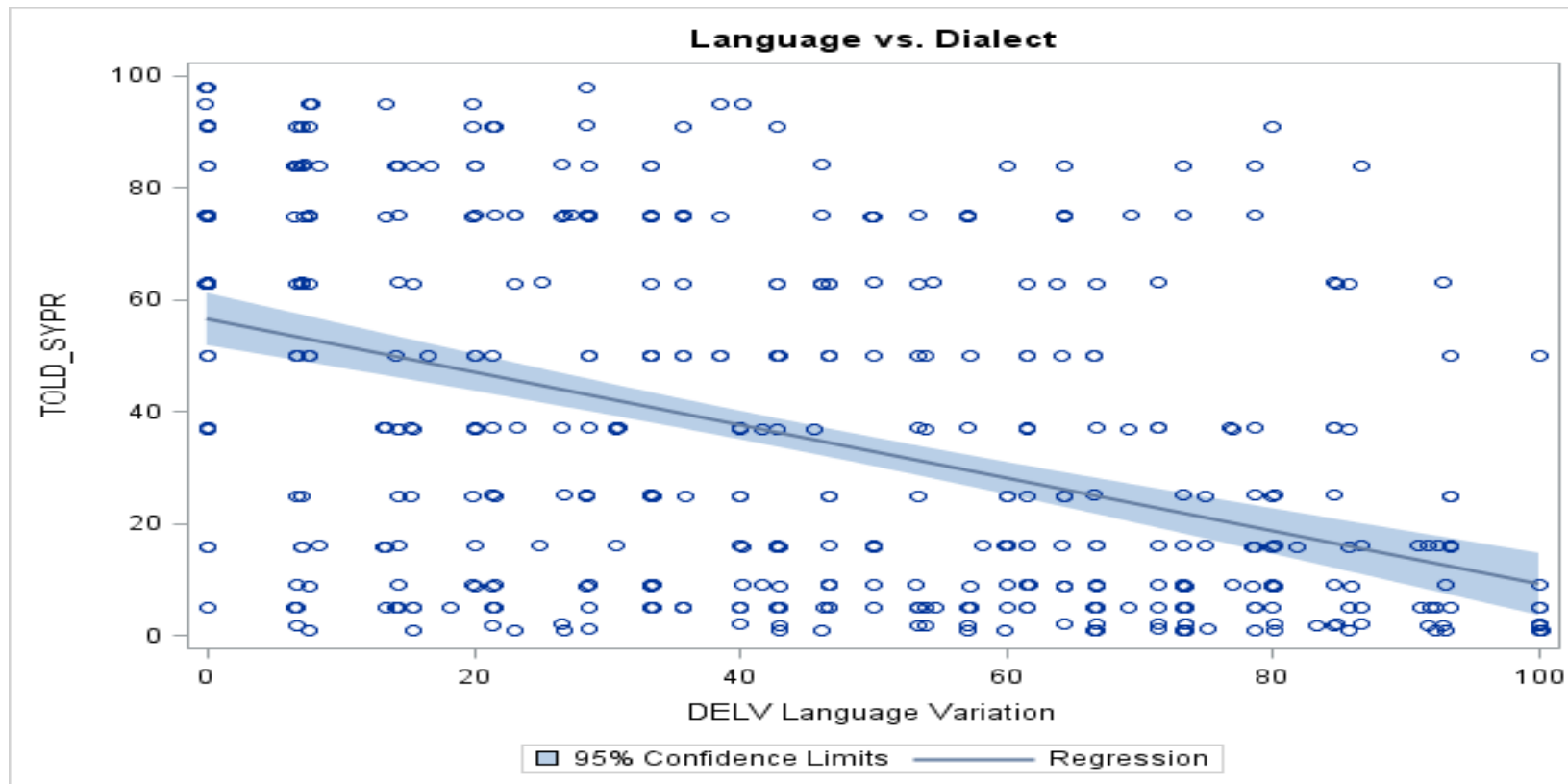
Table 4. Parameter Estimates based on the Univariate Dual Change Score Model for each Outcome

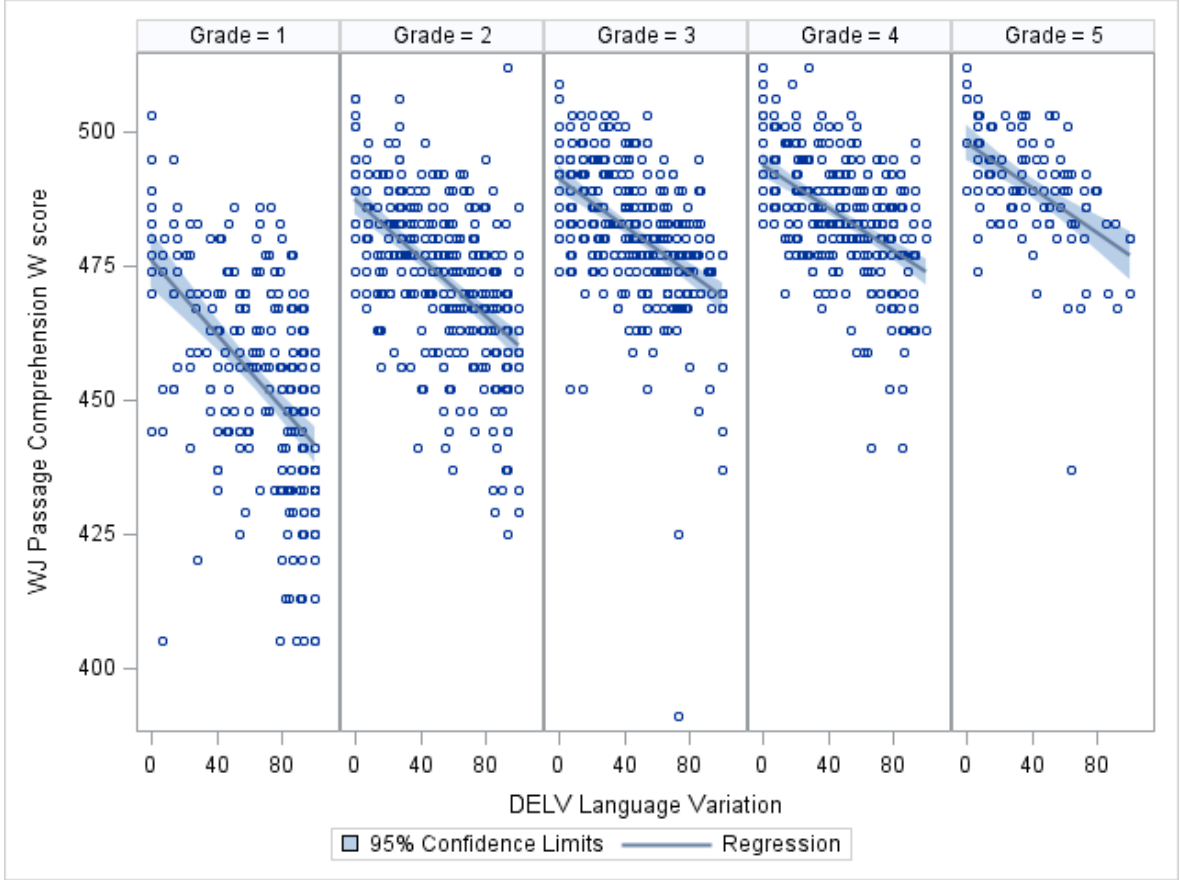
	Dialect Density		Language		Passage comprehension	
	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>	<i>Estimate</i>	<i>SE</i>
Intercept mean	64.72	1.49	-0.55	0.05	22.69	0.05
Slope mean	-4.66	1.29	0.47	0.02	6.23	0.44
β Change	-0.04	0.02	0.03	0.02	-0.23	0.02
β Change, grade 1	—	—	—	—	-0.25	0.02
Intercept variance	703.77	65.51	0.63	0.06	0.85	0.08
Residual variance	176.96	12.32	0.23	0.02	0.12	0.01

High Degree of Variation

- Even with a potential decrease in dialect density for most children in first grade, the range of dialect density in this study was still wide, SD = 22% to 33% per grade
- Children with the highest dialect density after the initial decrease in first grade may still be producing densities as high as 70% in fifth grade. These are the children at greatest risk for reading problems as they go through school

The density of dialect use predicts performance on general language... and reading assessments:





Overall...

The relationship between Letter-Word Identification and dialect is strong, negative, and consistent across grades

At higher levels of dialect, children consistently show lower levels of syntactic understanding.

At higher levels of dialect use, children tend to show higher levels of language risk.

Low dialect users do not show these patterns of risk

Bivariate Growth Curve Models (Washington, Branum-Martin, Sun and Lee-James, 2018)

- Growth in reading slows down in the face of dialect usage starting in second grade
- We found a complex and dynamic relationship between dialect and reading

Bivariate Growth Curve Models (Washington, Branum-Martin, Sun and Lee-James, 2018)

- Importantly, the relationship between dialect density and reading is **reciprocal**: children who were strong readers were better at decreasing dialect use over time, and children who were higher dialect users had slower reading growth.



Gender Differences

Washington, Branum-Martin, James & Sun, 2018