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Predicting School Success

December 13, 2016

The Honorable Senator Kirk Watson, The Senate of Texas

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Laura Koenig, Director of School Readiness, E3 Alliance

Dr. Amy Wiseman, Director of Research Studies, E3 Alliance

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Understanding School Readiness

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Why do we care about school readiness?

Individuals

Schools

Community

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What Factors Are Associated With School Success?

Security

Early Experience

Maternal Education Levels

Demographics

Kindergarten Readiness

Effective Instruction

Meaningful Assessment

Appropriate Intervention

School Success

Out of School Time

Attendance

Family Involvement

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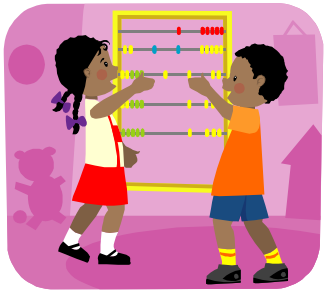
Strong Foundational Skills: The Basis For Future Learning

Behavior, Social & Emotional Skills

Language & Communication Skills

Emerging Literacy & Math Skills

+



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Measuring School Readiness

- Representative of the *2015 Texas Pre-K Guidelines*
- Aligned to Texas Essential Knowledge and Skills (TEKS)
- Multidimensional
- Developmentally appropriate and measurable
- Validated: Predicts 3rd grade achievement
- Developed by early childhood education providers and researchers from The University of Texas at Austin and Texas State University

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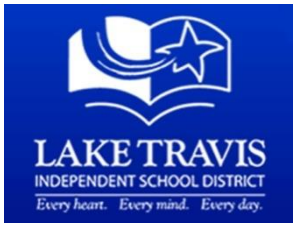
Kindergarten Readiness Partners



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Assessing Kindergarten Readiness

- Six years data collection (2010-11 to 2015-16)
- 12 Central Texas School Districts, 54 schools
- 4,517 Kindergarten students
  - 2% Asian
  - 12% Black
  - 58% Hispanic
  - 26% White
- 67% Low Income
- 34% English Language Learners
- Data weighted to represent region

Ready, Set, K! participants 2010-11 to 2015-16

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Factors Associated with Kindergarten Readiness

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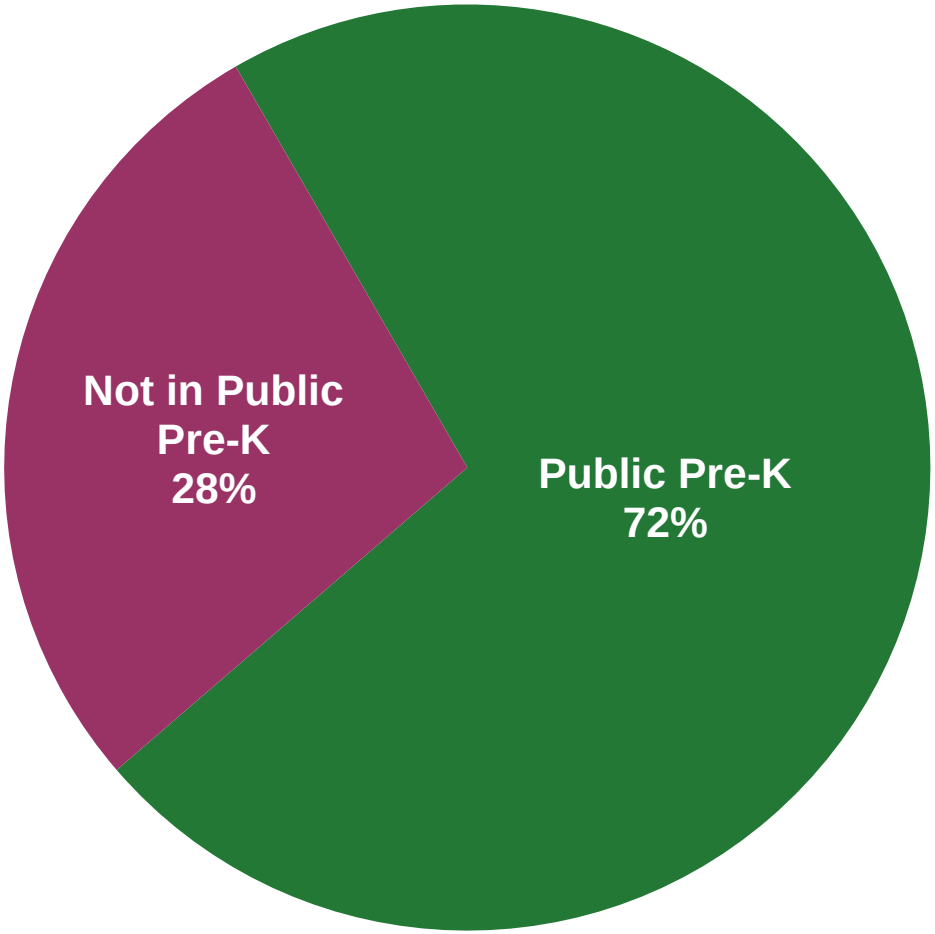
7 in 10 Eligible Children Attend District Pre-K

**Experience in Year Prior to Kindergarten in 2015-16
for Children Eligible for Pre-K According to State Dataset**



E3 Alliance Analysis of *Ready,Set,K!* weighted data, Central Texas; Prior Experience known for 98% of sample

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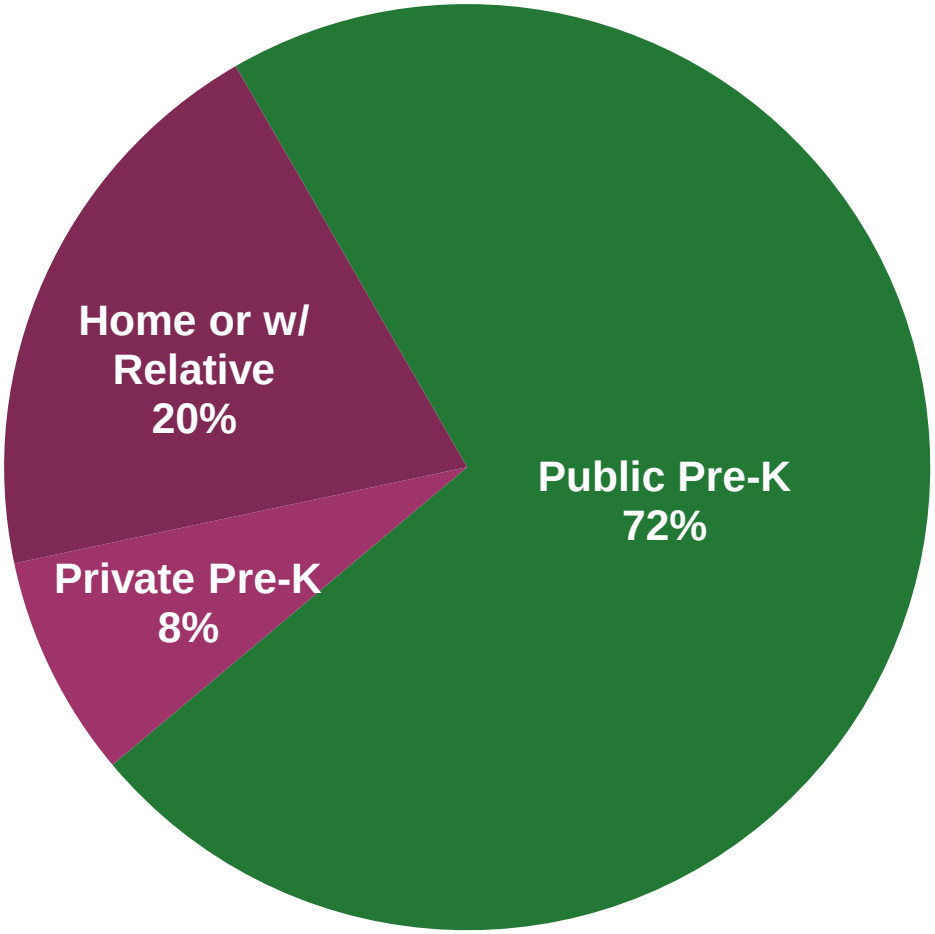

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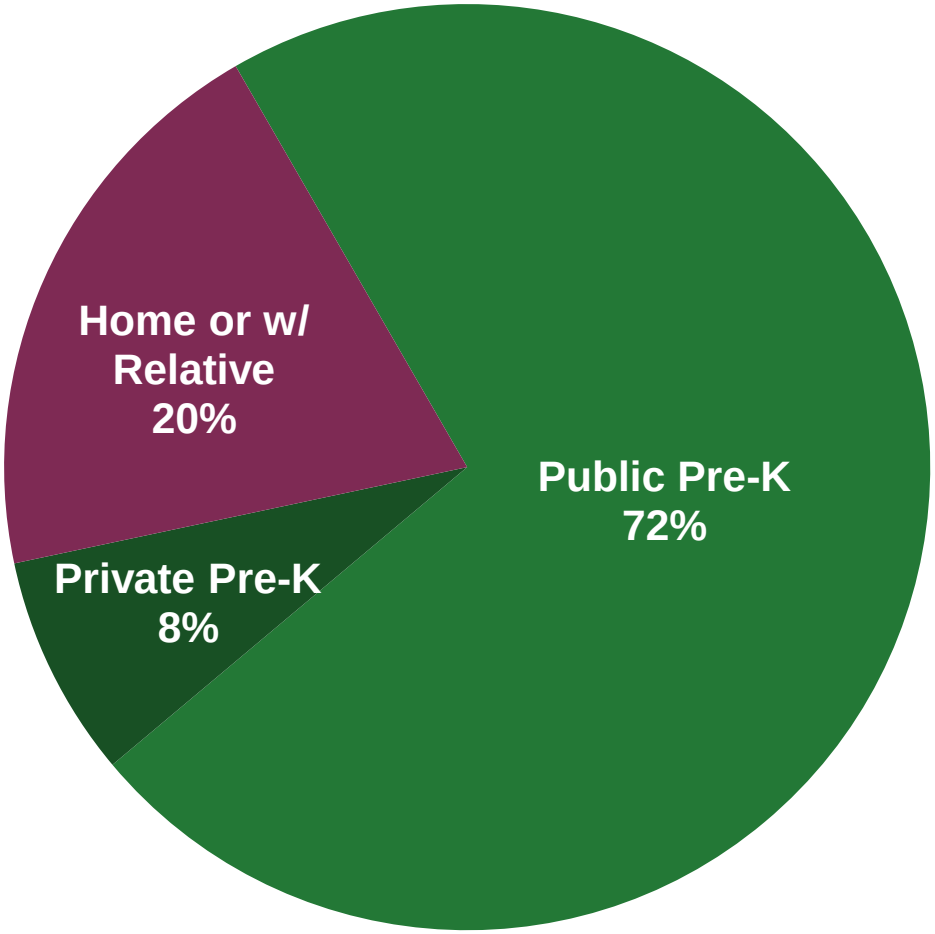

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E3 Alliance Analysis of *Ready,Set,K!* weighted data, Central Texas; Prior Experience known for 98% of sample

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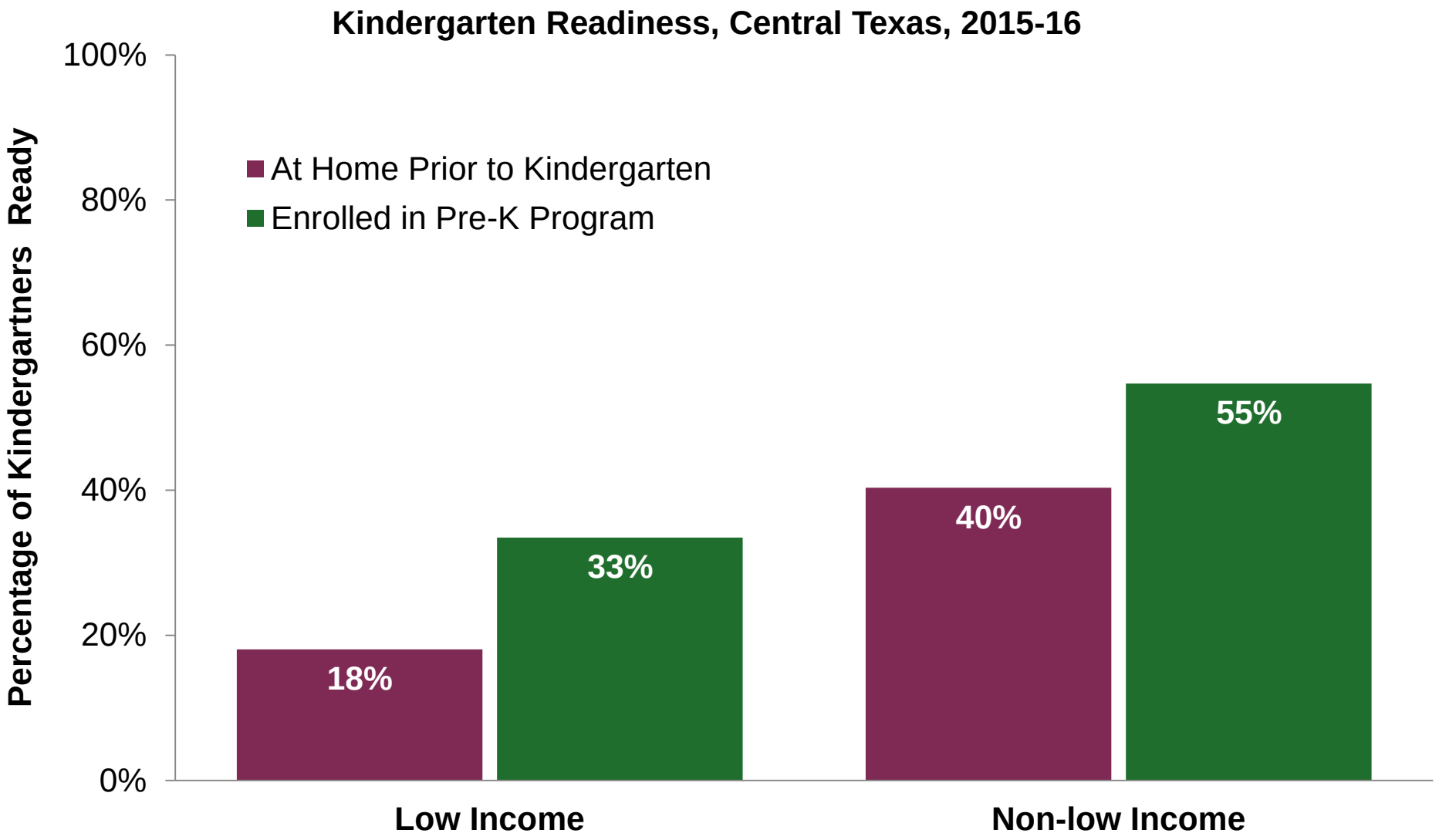
More Students with Pre-K Ready for School



E3 Alliance Analysis of *Ready,Set,K!* weighted data
PK enrollment includes Public and Private Pre-K programs

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Understanding Odds & Odd Ratios

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Odds Ratios Example

Odds of Penny Landing on Heads

$$\frac{\text{.50}}{\text{.50}} = 1$$

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Odds Ratios Example

Odds of Penny Landing on Tails

$$\frac{.50}{.50} = 1$$

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Odds Ratios Example

$$\frac{\text{Odds of Landing on } \text{ }}{\text{Odds of Landing on } \text{ }} = \frac{1}{1} = 1$$

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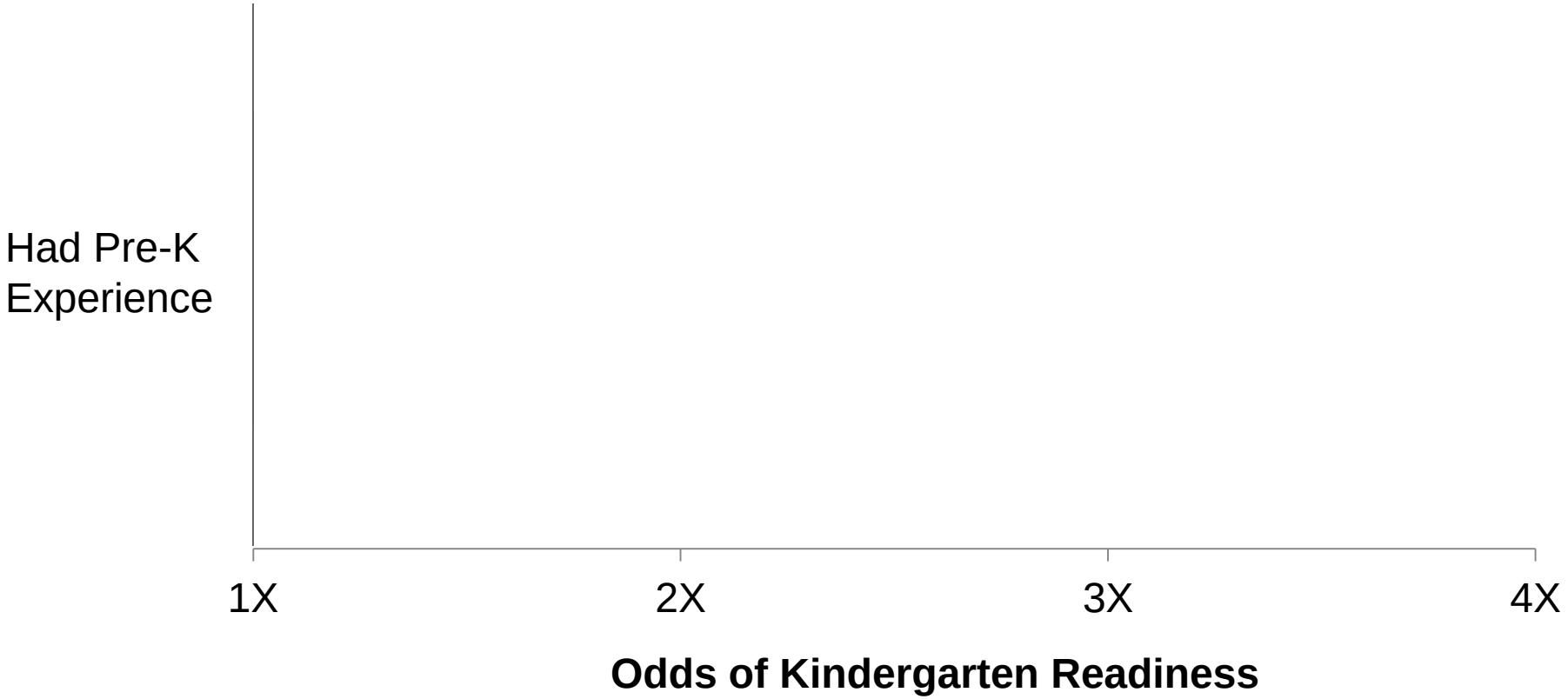
Kindergartners With Pre-K Experience 3 Times as Likely to Be Ready for Kindergarten

Odds of Kindergarten Readiness Based on Pre-K Enrollment Status, Central Texas, 2010-11 to 2015-16



E3 Alliance analysis of *Ready,Set,K! weighted data*; odds ratios from logistic regression with Pre-K enrollment (Public & Private), income status and gender as predictors

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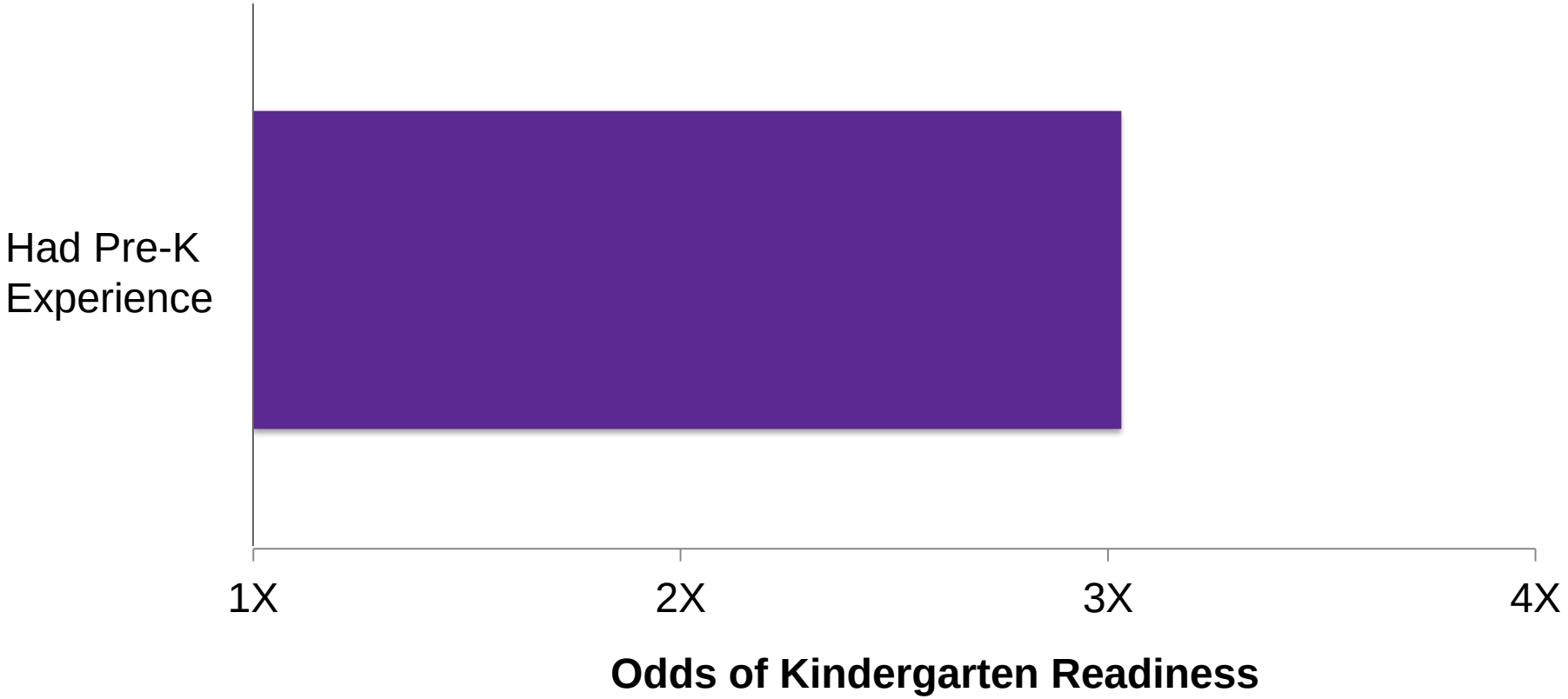

E3 Alliance analysis of *Ready,Set,K! weighted data*; odds ratios from logistic regression with Pre-K enrollment (Public & Private), income status and gender as predictors

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Deep Dive into Public School Pre-K

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Pre-K Factors Related to Readiness

- Amount of Instruction
  - State pays for half day instruction in Pre-K
  - Some districts choose to use local budget or partnerships to have full day Pre-K
- Student-Teacher Ratio – based on two factors
  - Class size
  - Number of teachers per class

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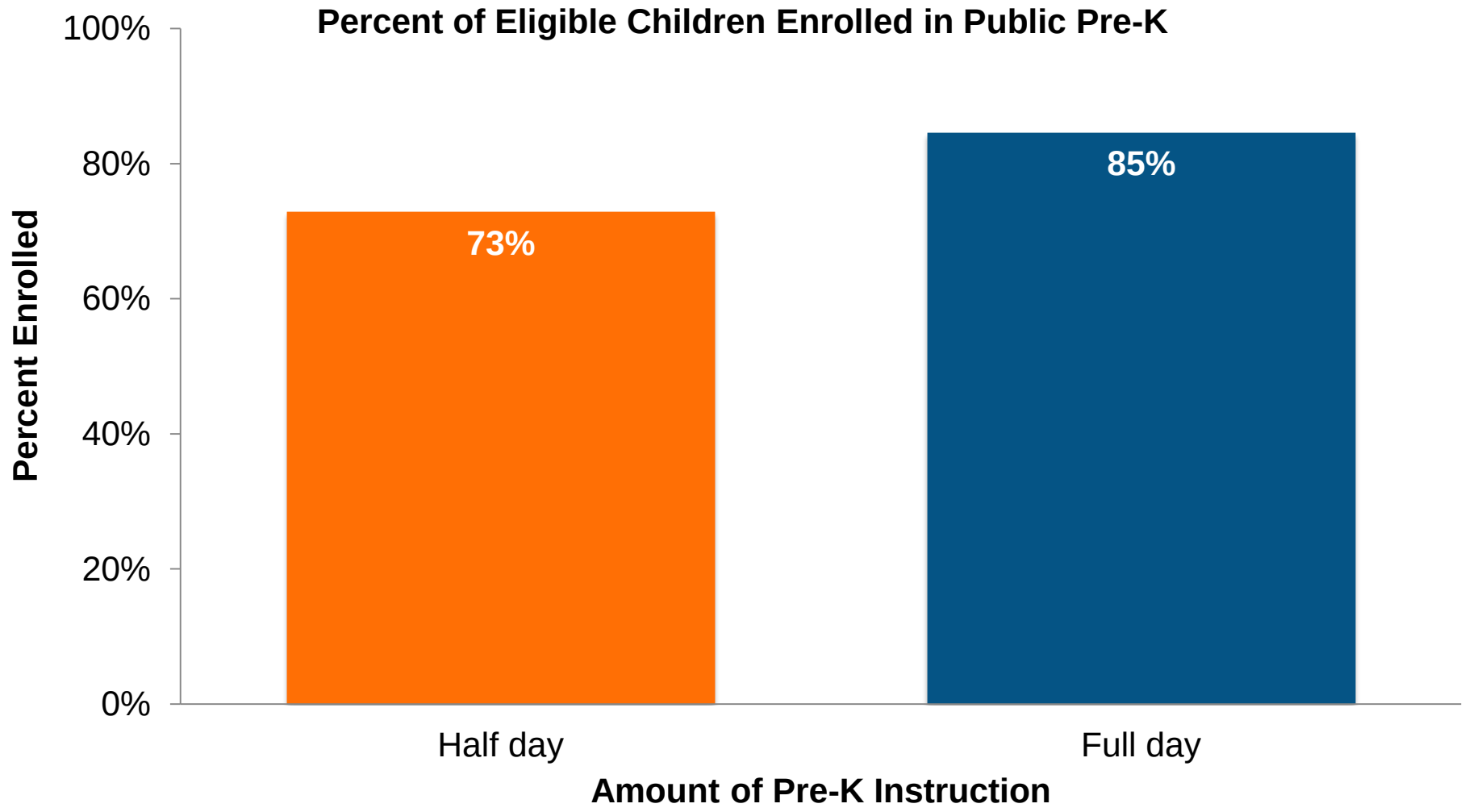
Parents Enroll Children at Higher Rates in Full-Day Pre-K Districts



Eligible = Low Income and/or English Language Learner
Source: E3 analysis of data from the UT Austin Education Research Center, Central Texas, 2012-13

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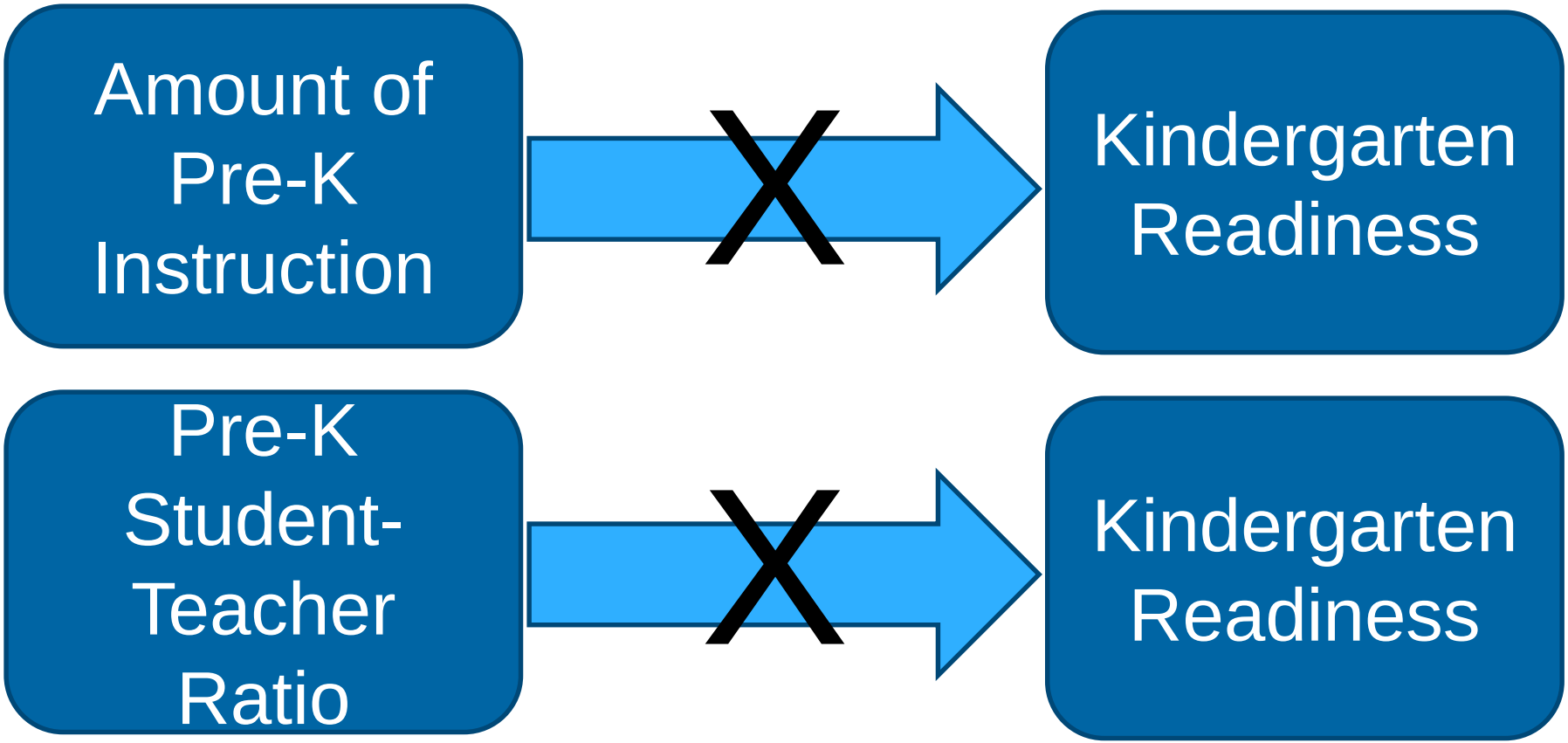
Pre-K Factors Related to Kindergarten Readiness



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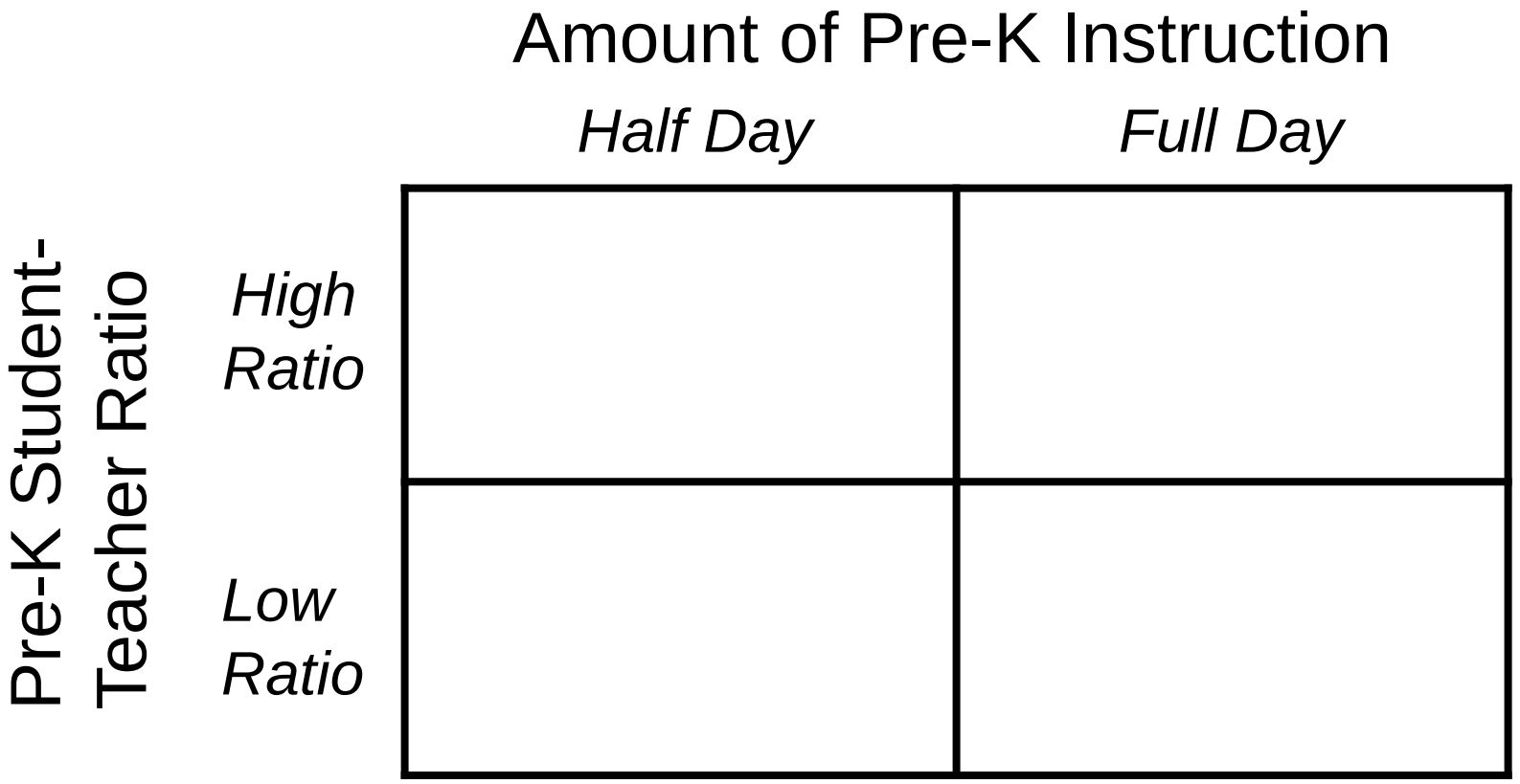
Important to Examine Amount of Instruction and Student-Teacher Ratio Together



Eligible = Low income and/or English Language Learner; Low Ratio is <=15 students/teacher
Source: E3 Alliance analysis of Central Texas *Ready,Set,K!* data from 2010-11 to 2014-15

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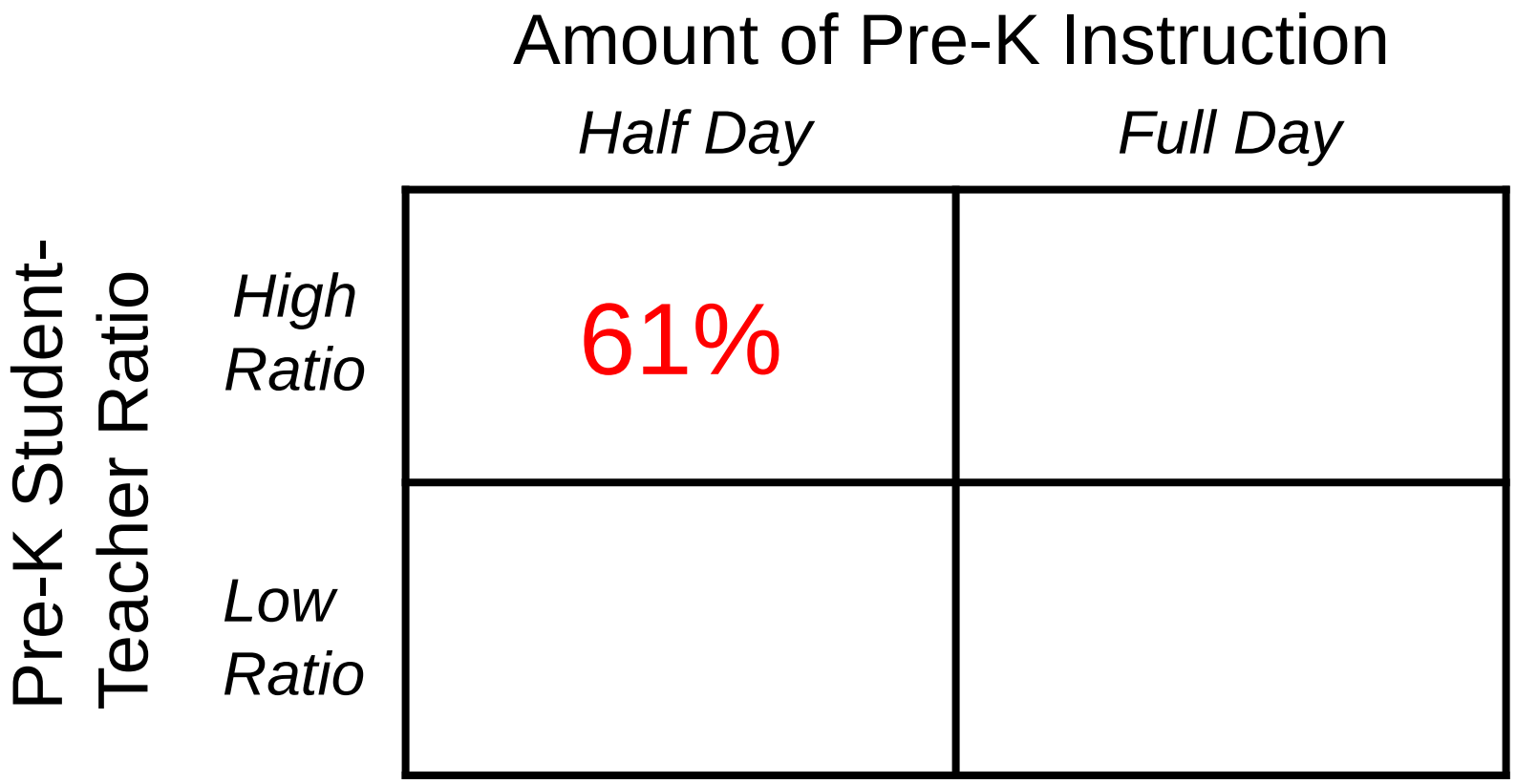
Greatest Language Readiness with Full Day Pre-K and Low Student-Teacher Ratio

Percent of Eligible Children Ready in Language and Communication by Pre-K Type



*Greater readiness than other groups, p = .002
Eligible = Low income and/or English Language Learner; Low Ratio is <=15 students/teacher
Source: E3 Alliance analysis of Central Texas *Ready,Set,K!* data from 2010-11 to 2014-15

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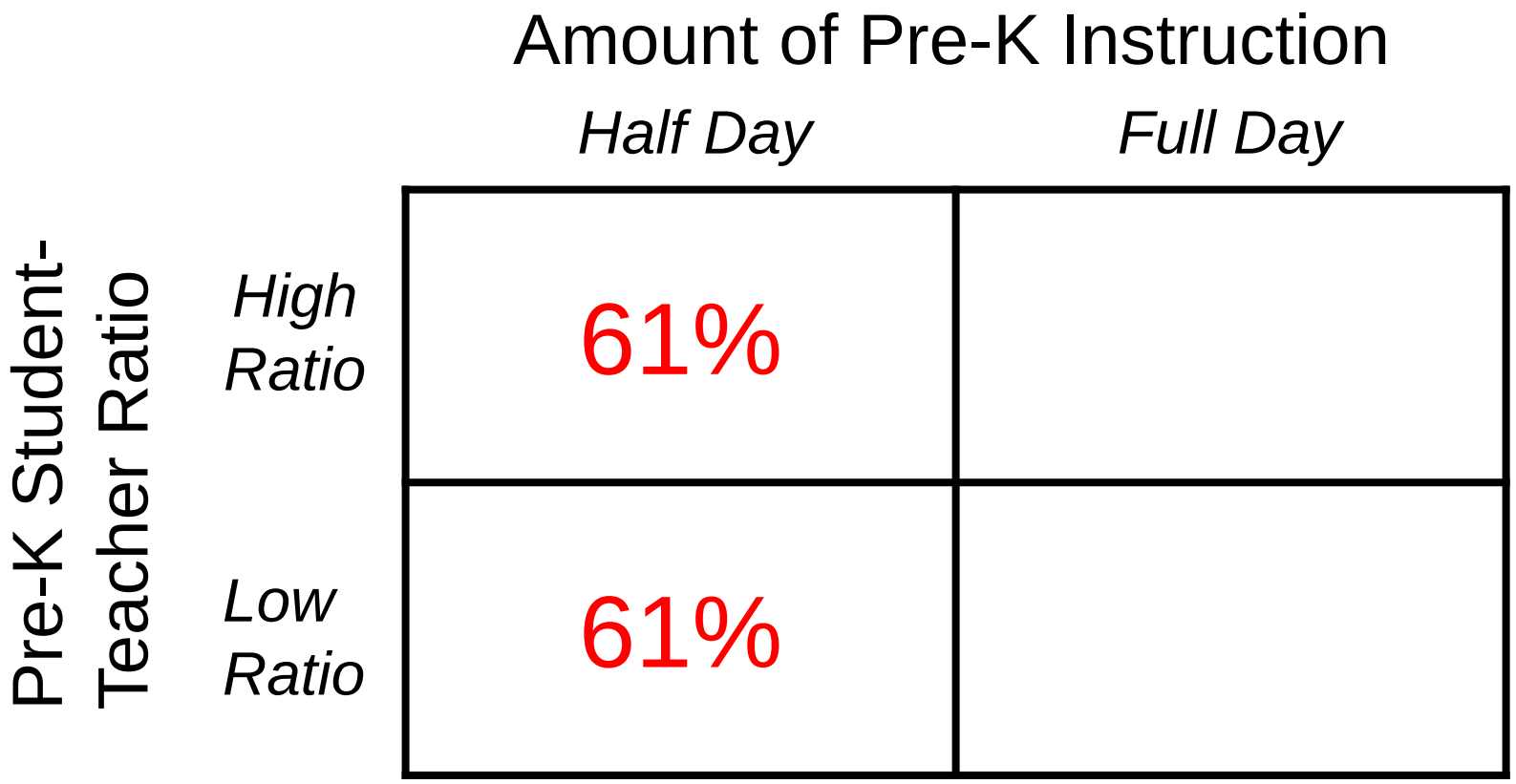

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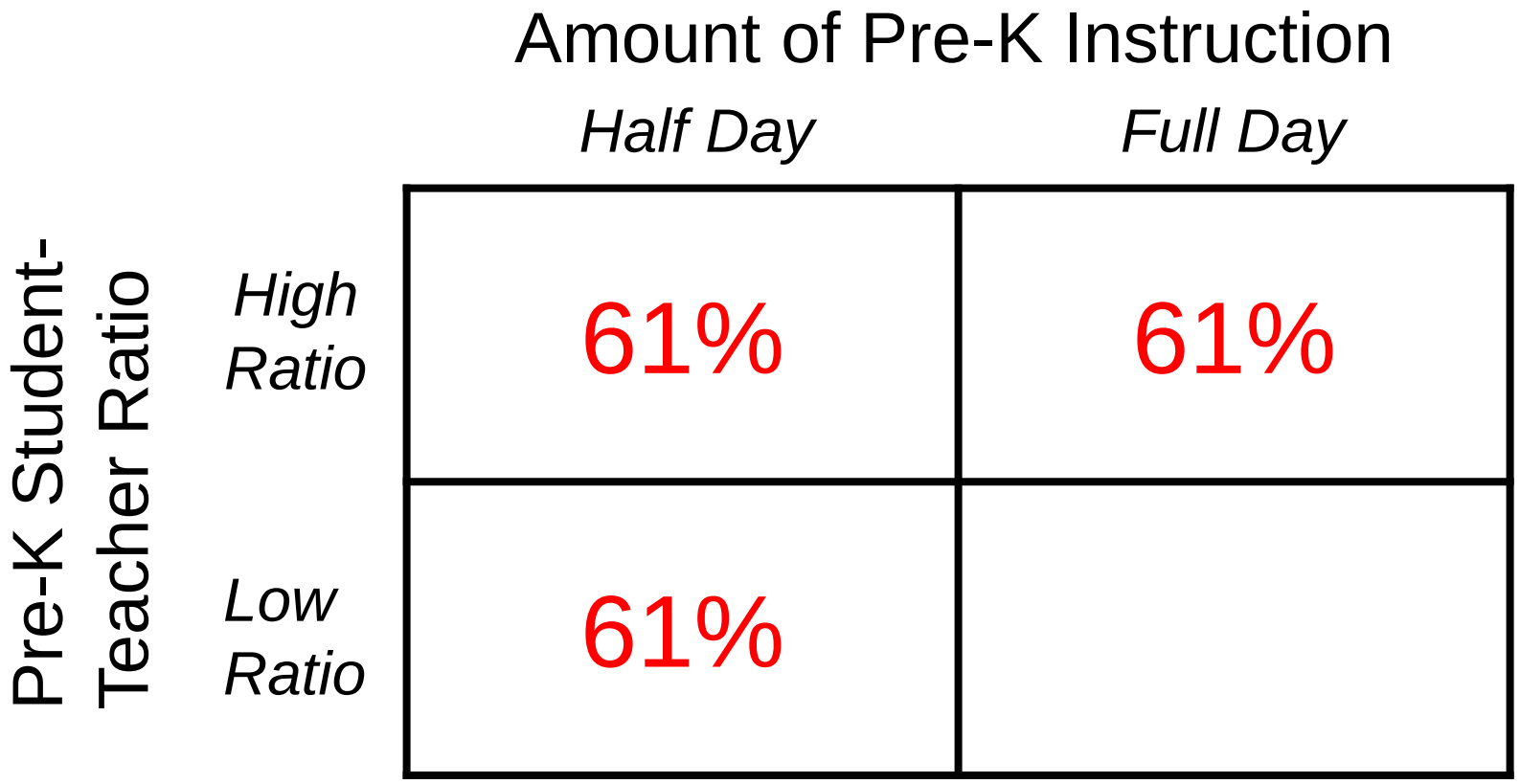

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Greatest Language Readiness with Full Day Pre-K and Low Student-Teacher Ratio

Percent of Eligible Children Ready in Language and Communication by Pre-K Type

Amount of Pre-K Instruction

Pre-K Student-Teacher Ratio	*Half Day*	*Full Day*
High Ratio	61%	61%
Low Ratio	61%	69%*

*Greater readiness than other groups, p = .002
Eligible = Low income and/or English Language Learner; Low Ratio is <=15 students/teacher
Source: E3 Alliance analysis of Central Texas *Ready,Set,K!* data from 2010-11 to 2014-15

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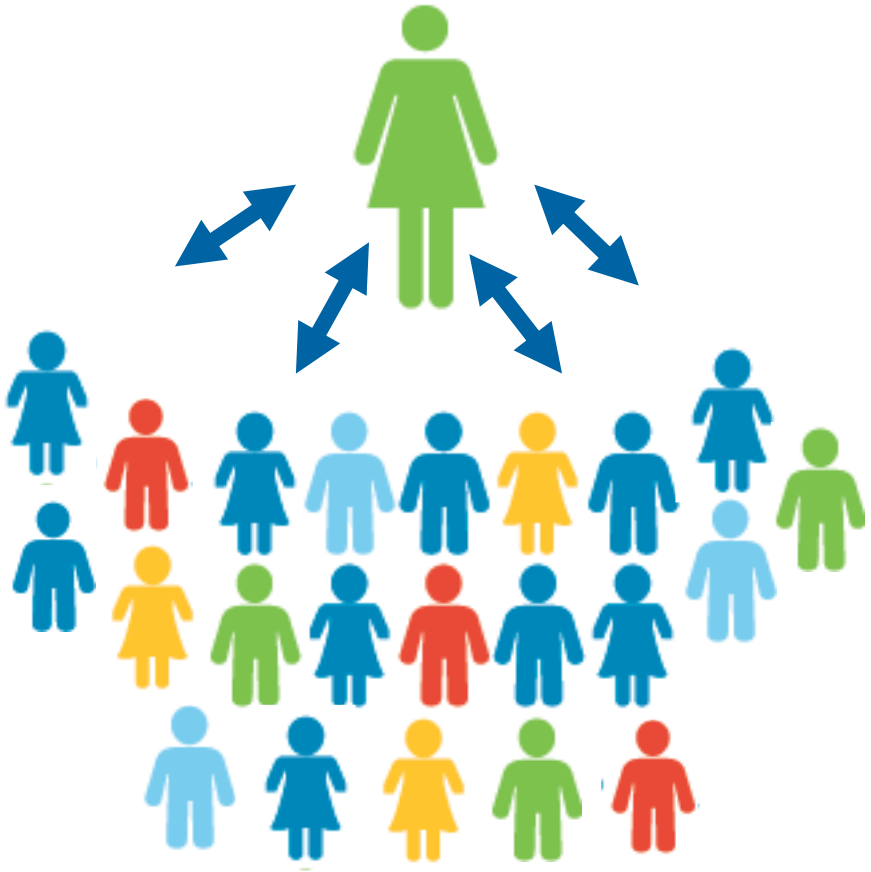
High Ratio Class Rooms



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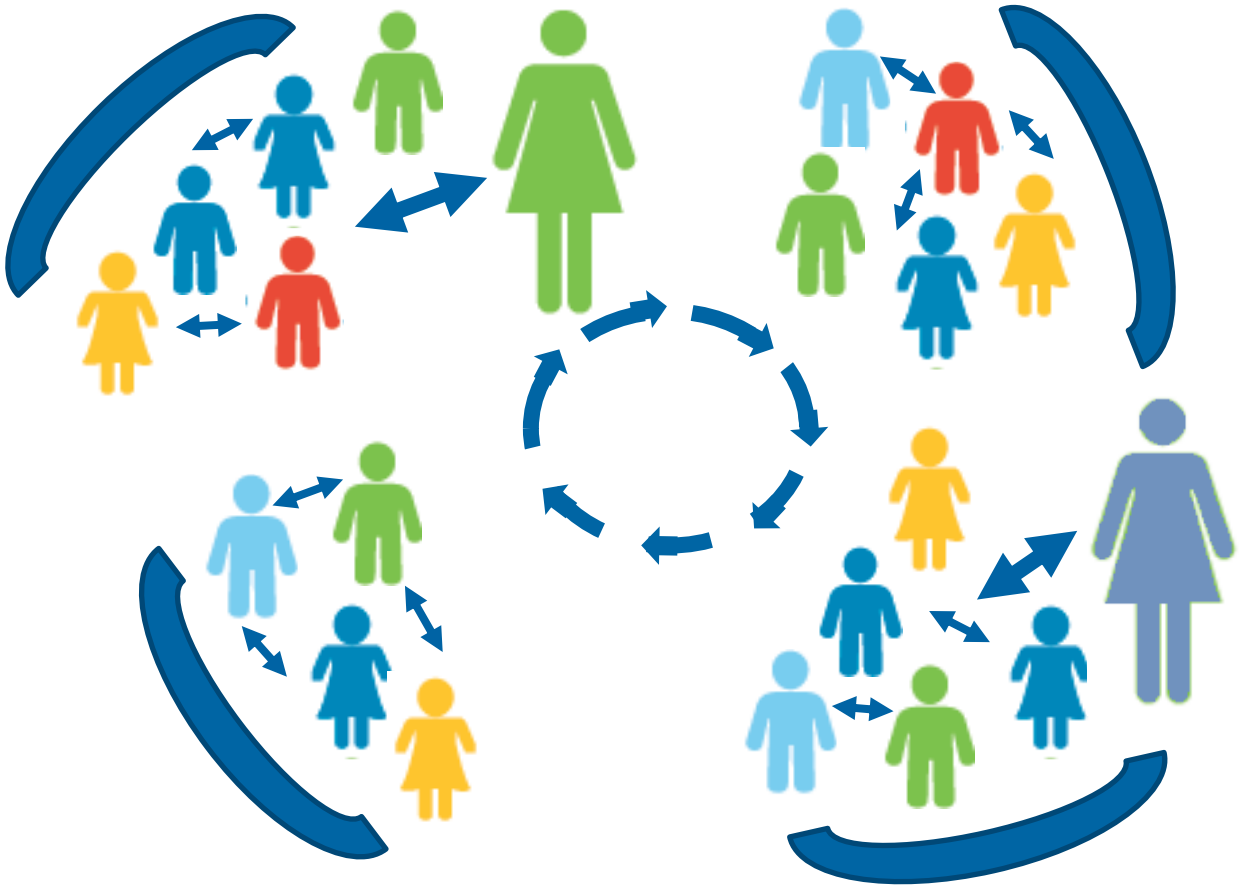
Lower Ratio Classrooms - Longer Instructional Day

May provide more opportunities for direct exploration and language expression



Low Student to Teacher Ratios (Less than or Equal to 15:1)

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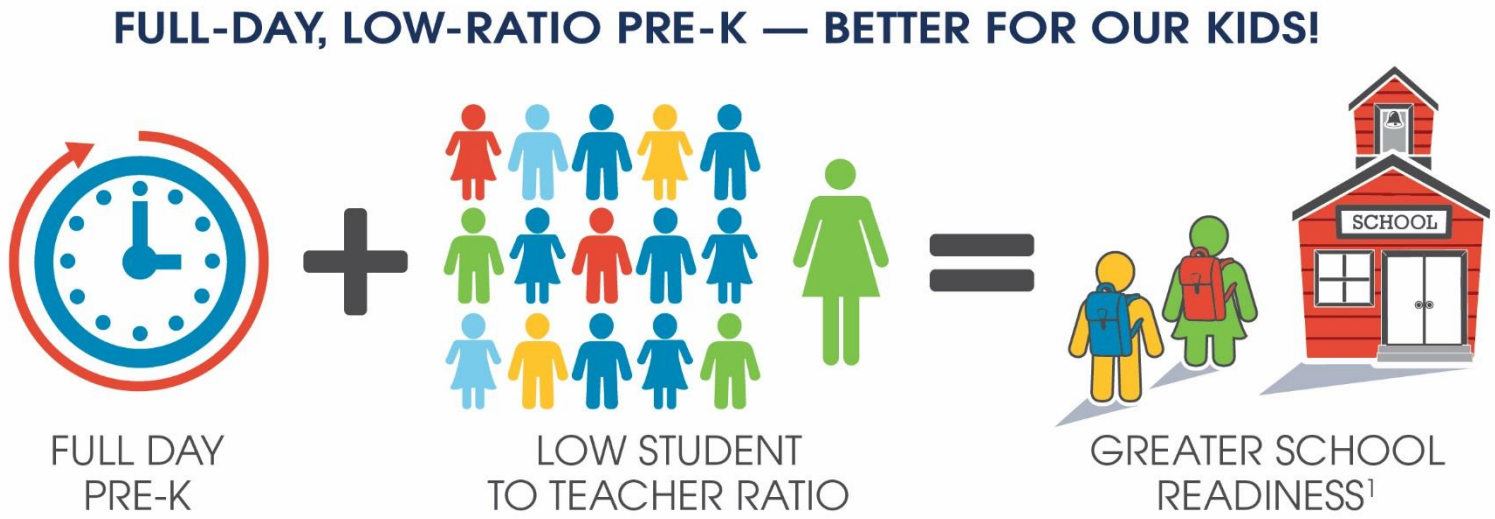
How Do We Increase Readiness?



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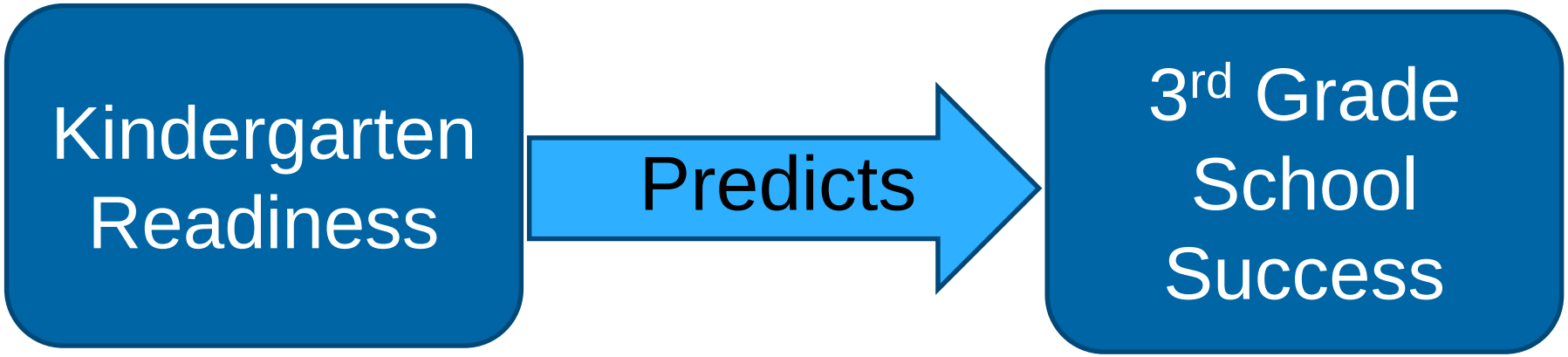
Why Is Kindergarten Readiness Important?



E3 Alliance analysis of *Ready,Set,K!* and data at the Education Research Center at UT Austin; odds ratios from model with income, ELL, gender, ethnicity, Kinder ready status as predictors; Kindergarten in 2011-12

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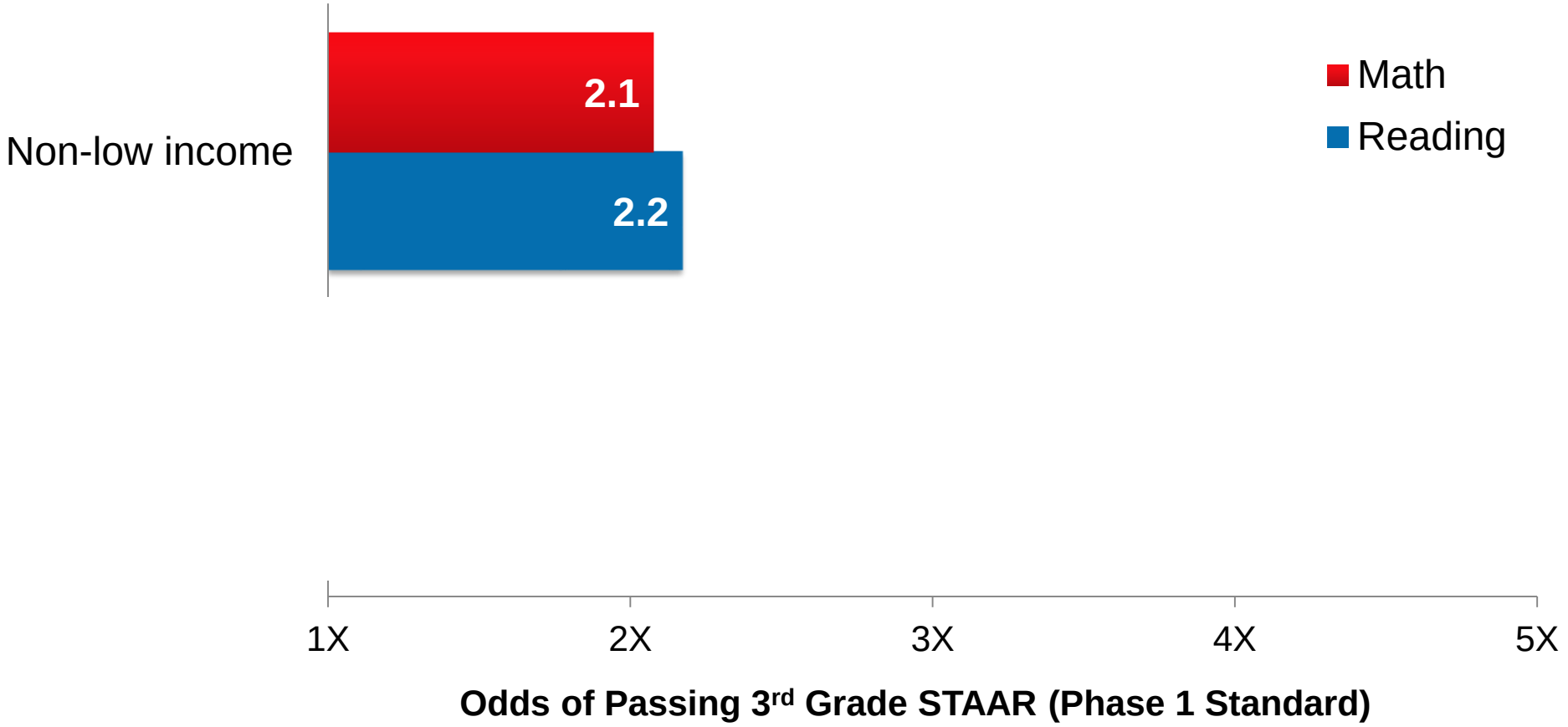
Kindergarten Readiness Status Strongest Predictor

Odds Ratios for Factors in Kindergarten that Predict Passing STAAR in 3rd Grade, Central Texas



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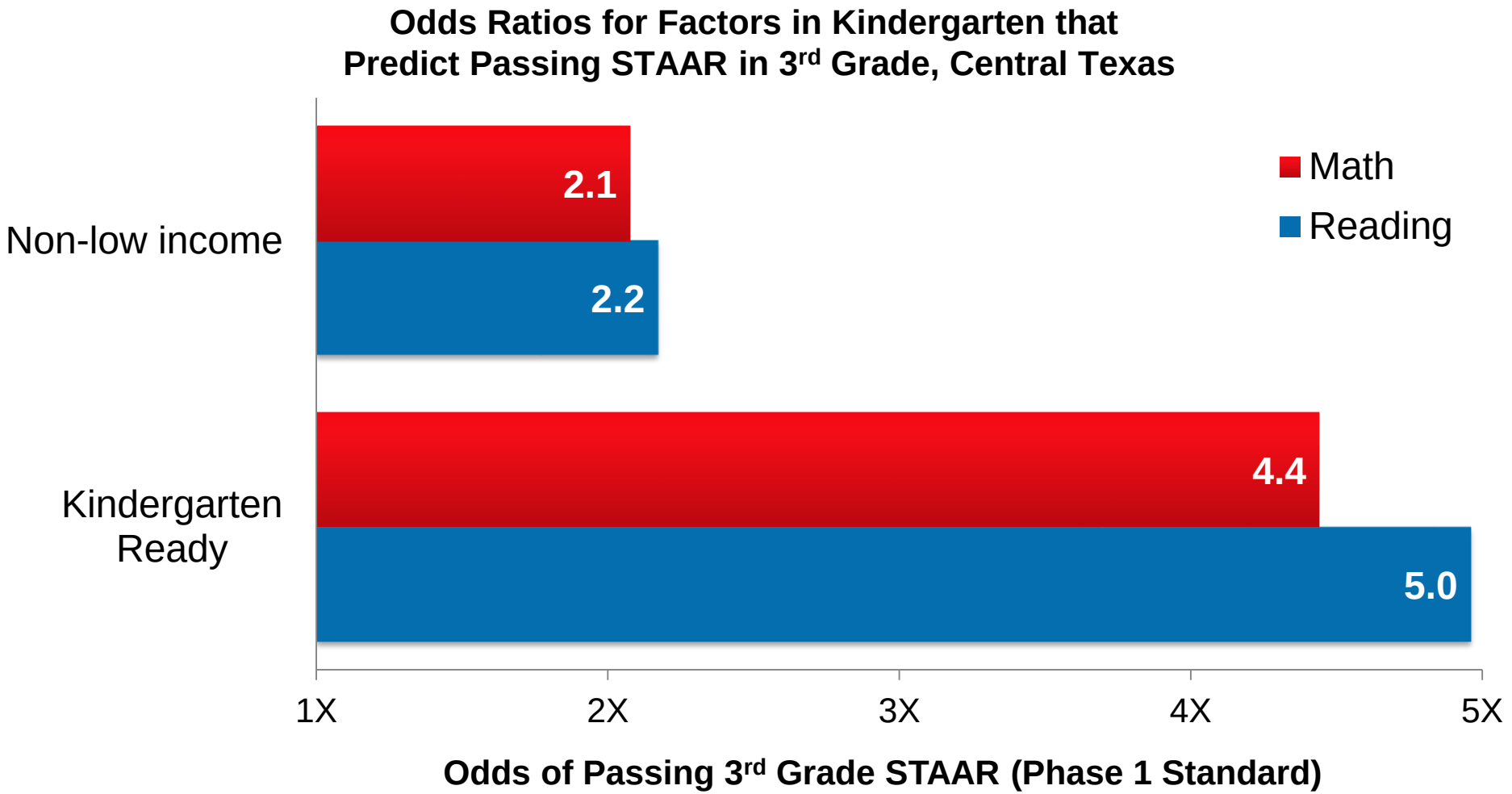

E3 Alliance analysis of *Ready,Set,K!* and data at the Education Research Center at UT Austin; odds ratios from model with income, ELL, gender, ethnicity, Kinder ready status as predictors; Kindergarten in 2011-12

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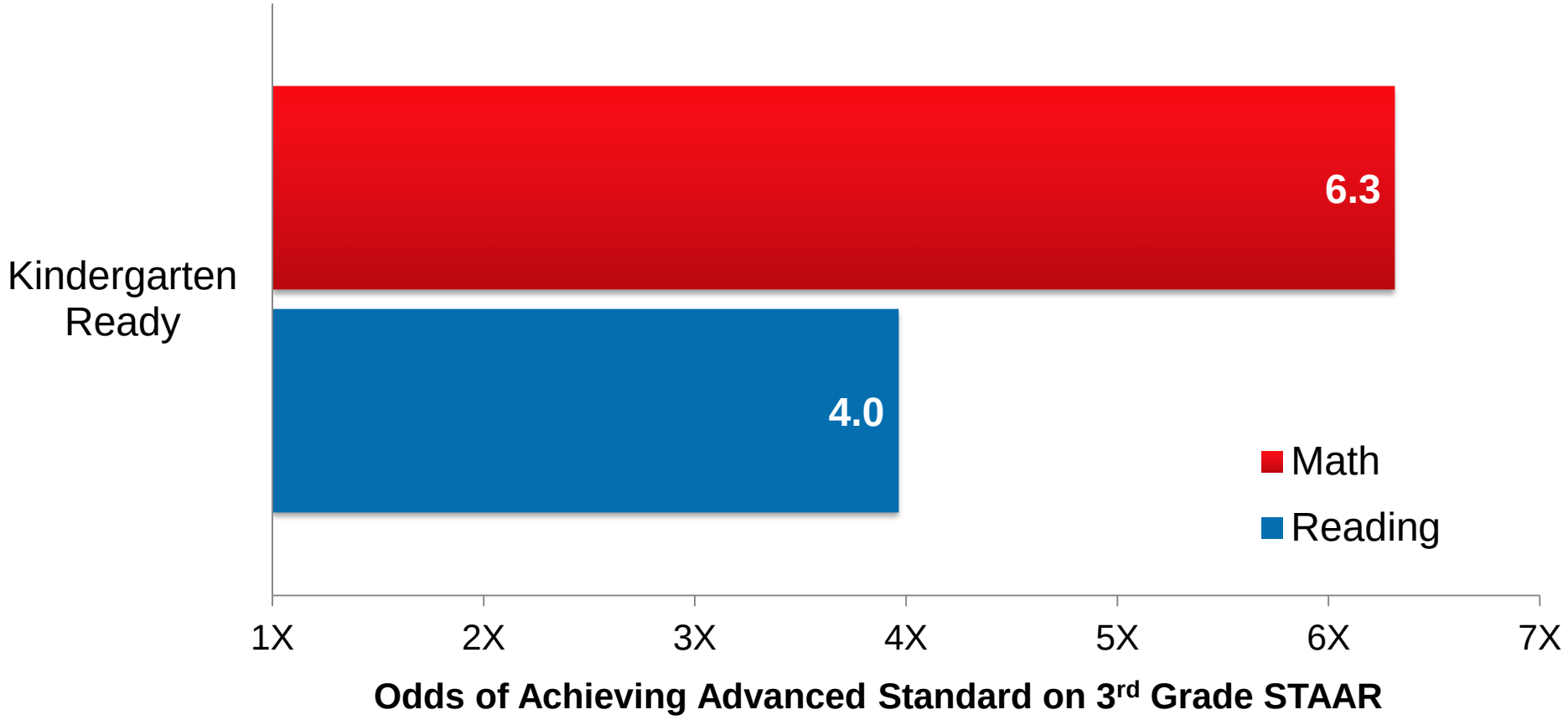
Kindergarten Readiness Even More Predictive of Advanced Performance on STAAR Math

Odd Ratios for Meeting STAAR Standard if Ready for Kindergarten, Central Texas



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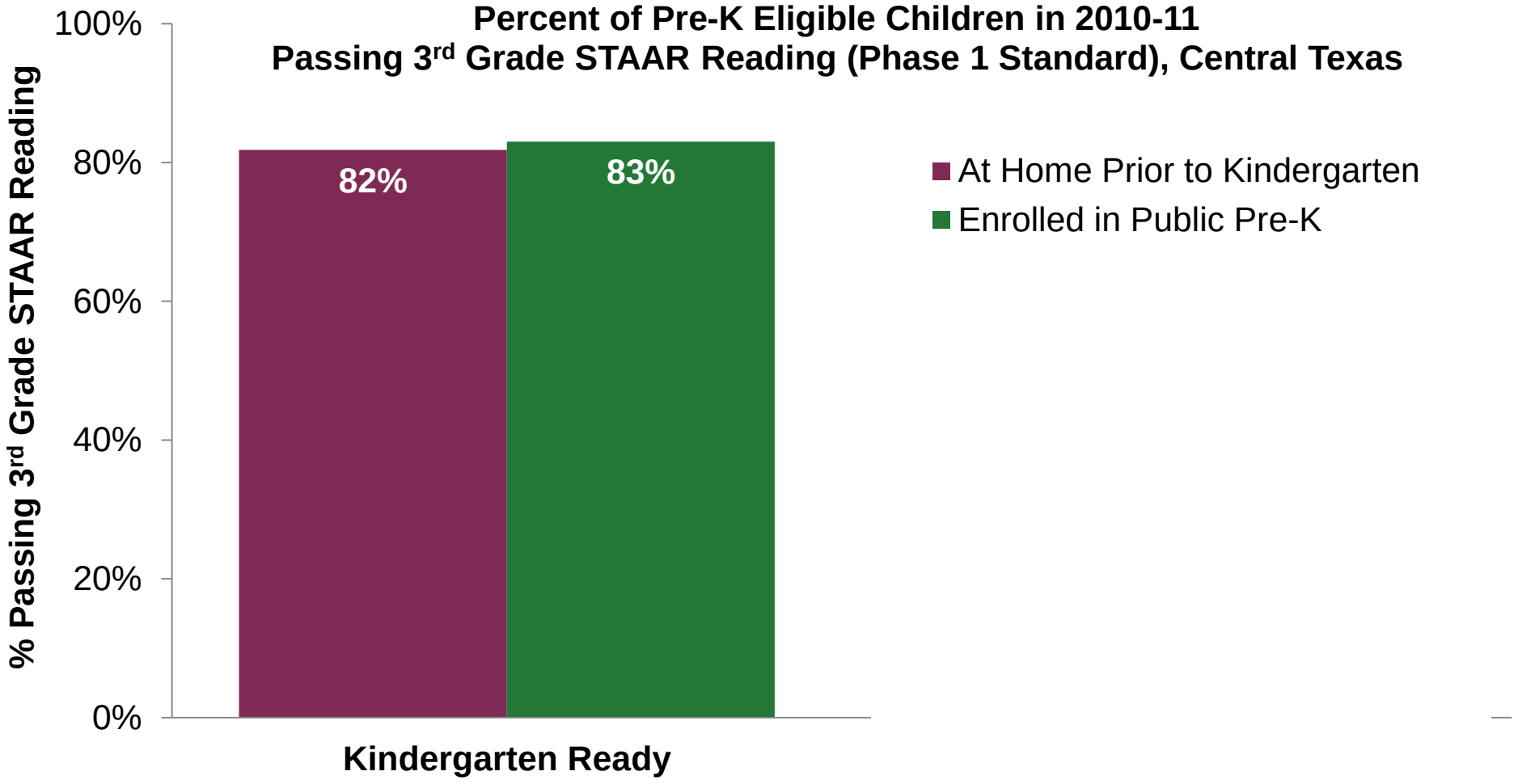
For Pre-K Eligible Children NOT Kinder Ready, Higher % Pass 3rd Grade STAAR Reading if in Pre-K



E3 Alliance Analysis of *Ready,Set,K!* weighted data at UT Austin Education Research Center

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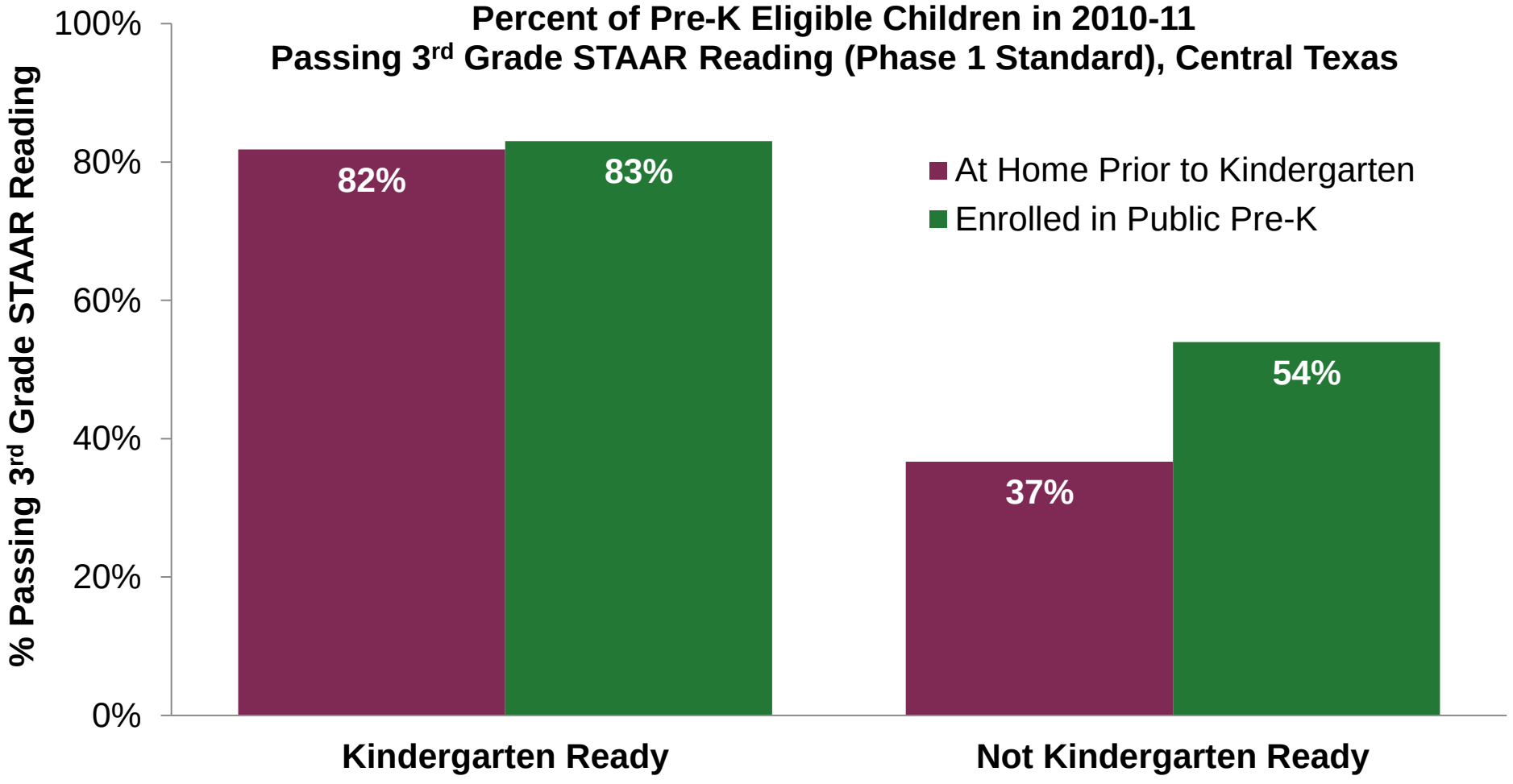

E3 Alliance Analysis of *Ready,Set,K!* weighted data at UT Austin Education Research Center

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Rates of Kindergarten Readiness

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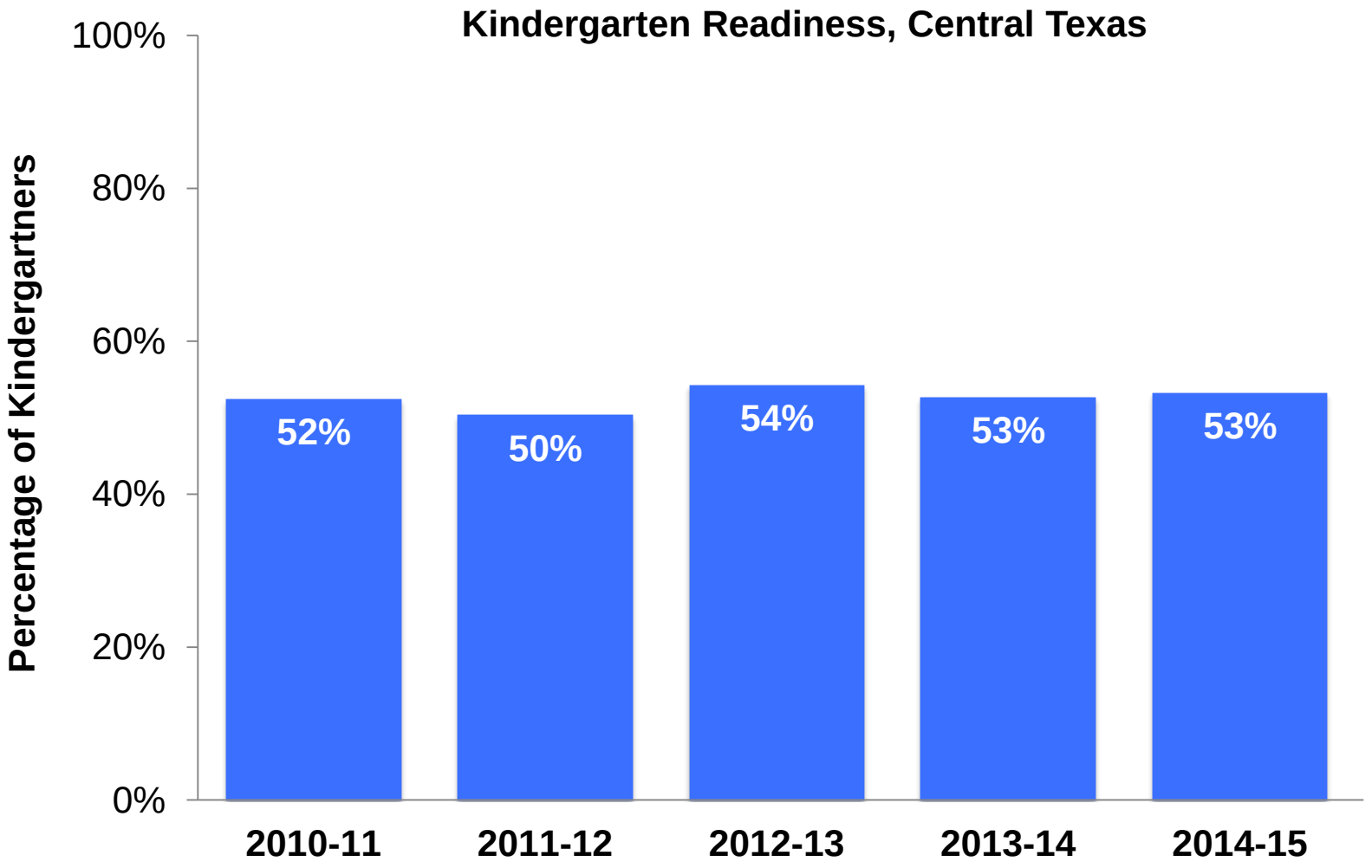
Kindergarten Readiness Rate Steady 2010-2015



Source: E3 Alliance Analysis of *Ready,Set,K!* weighted data

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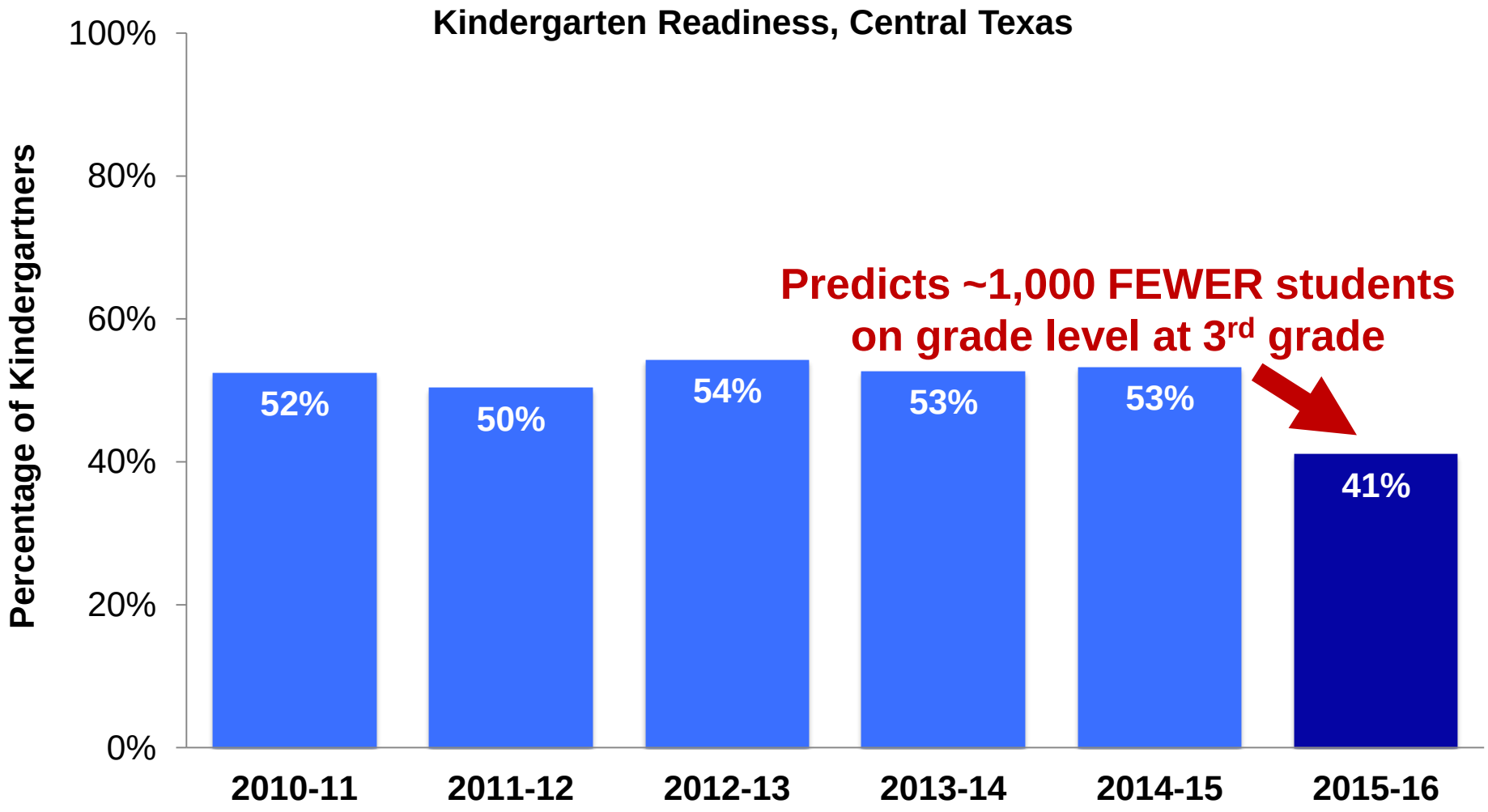
Kindergarten Readiness Rate Dropped in 2015-16



Source: E3 Alliance Analysis of *Ready,Set,K!* weighted data

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Why?

- Fewer children enrolled in Pre-K the year prior
  - English Language Learners enrolled at lower rates than any previous group in our study
- Demographic shifts:
  - Increases in poverty population
  - Increase in the very poorest of the poor

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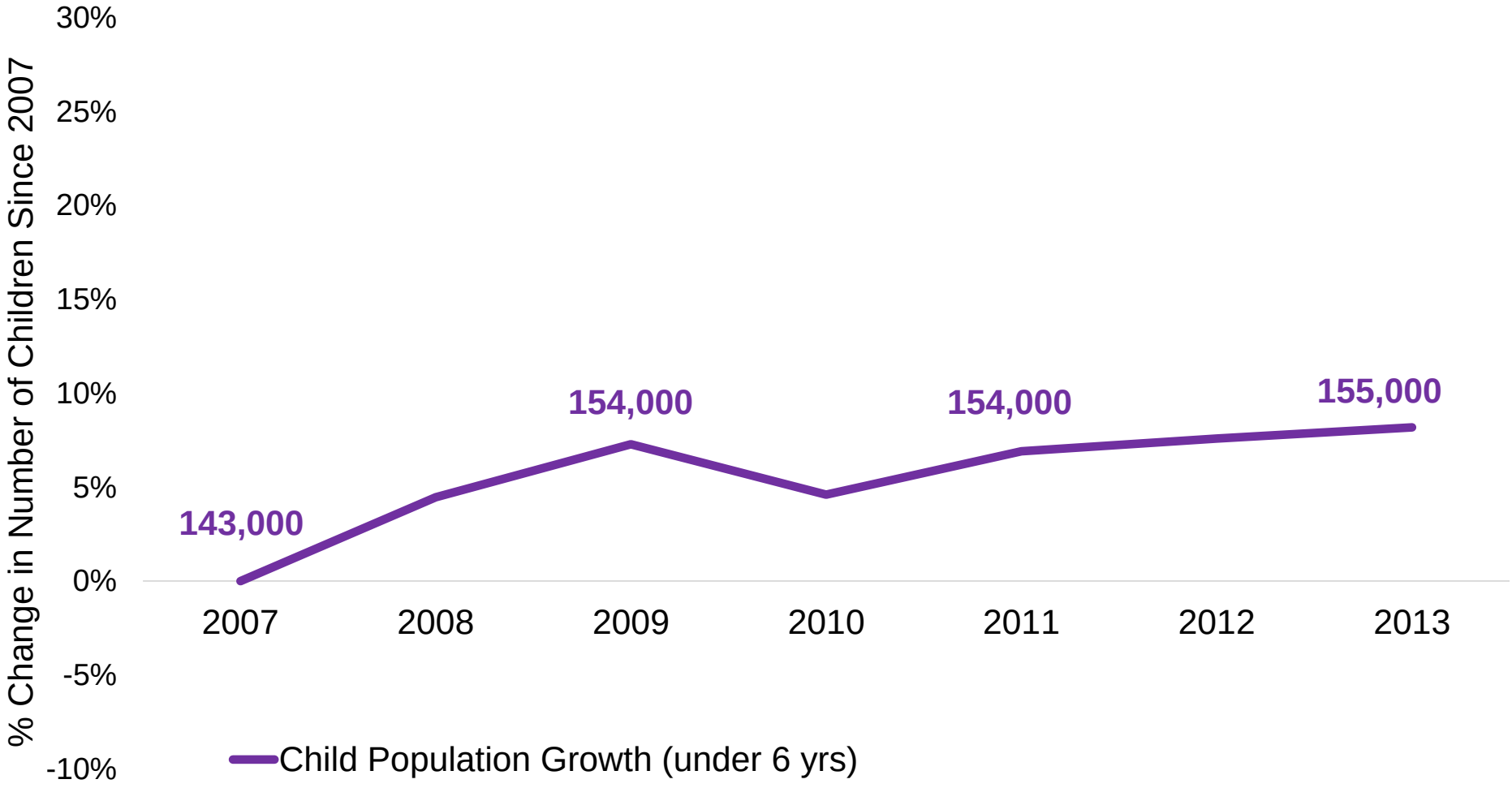
Child Population Growth Increasing



Source: Source: American Community Survey Table B17024: AGE BY RATIO OF INCOME TO POVERTY LEVEL (2007-2013) Children under 6 for Bastrop, Blanco, Caldwell, Hays, Travis and Williamson Counties

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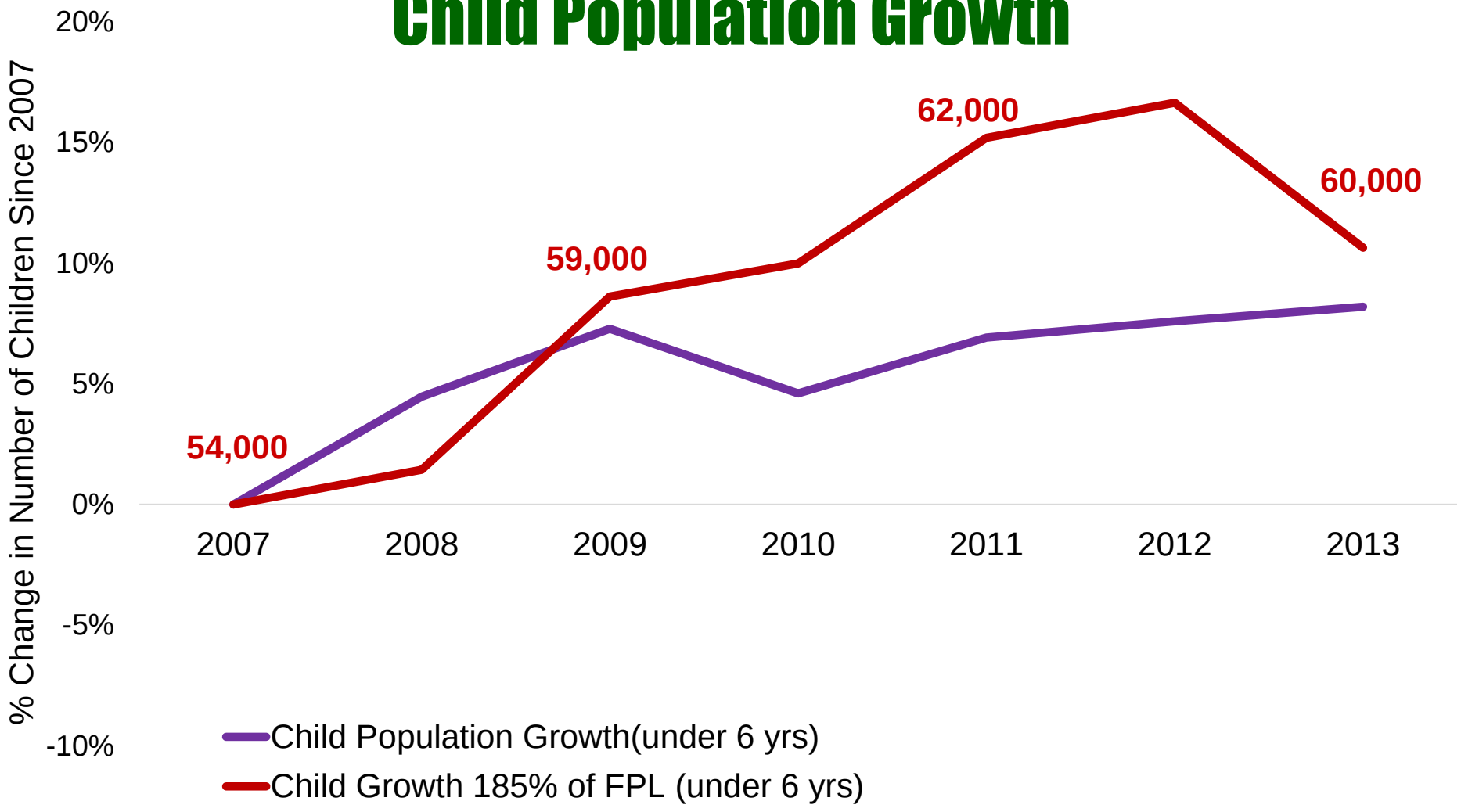
Child Poverty Growth Outpaces Child Population Growth



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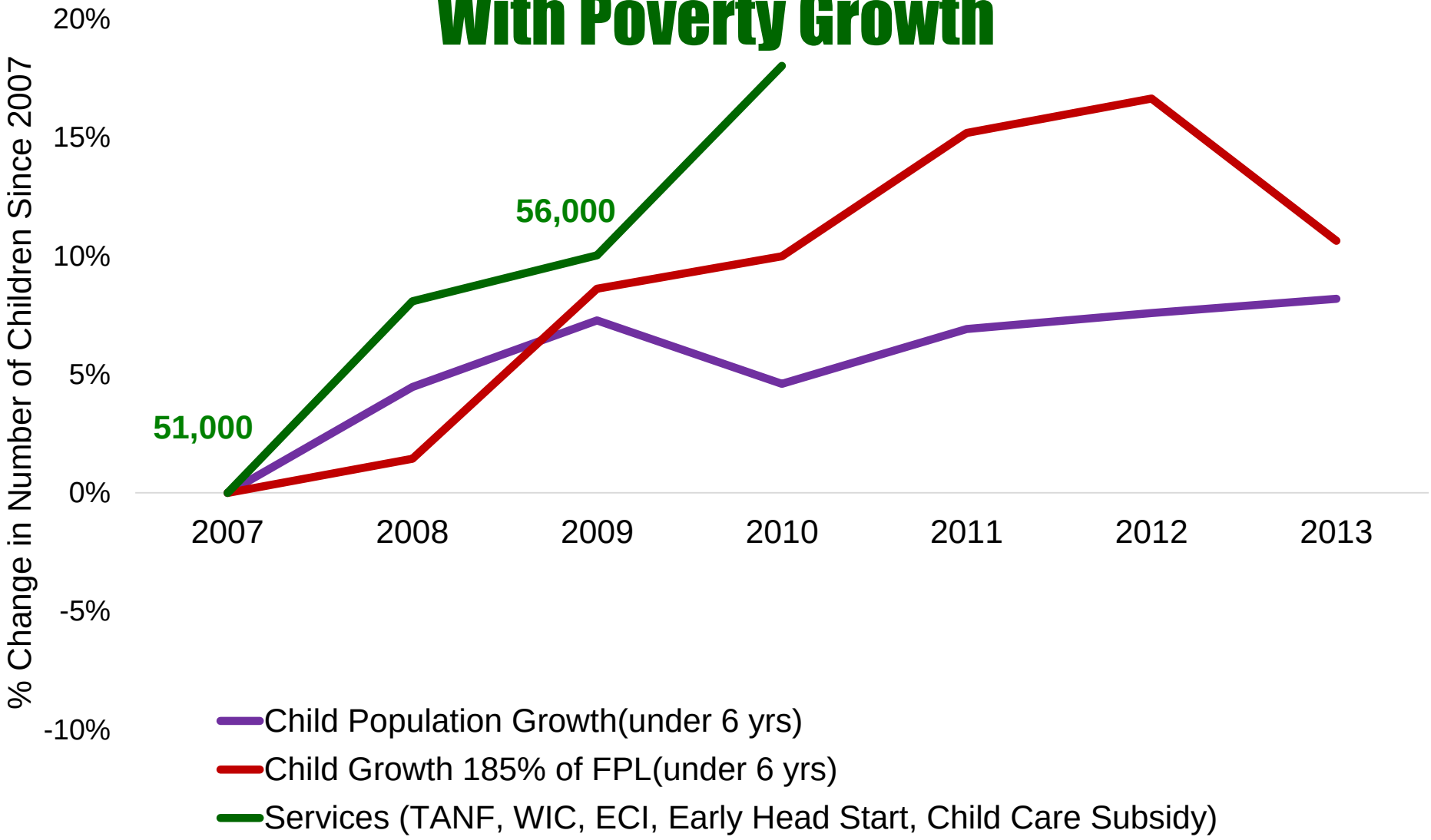
Services Have Not Kept Pace With Poverty Growth



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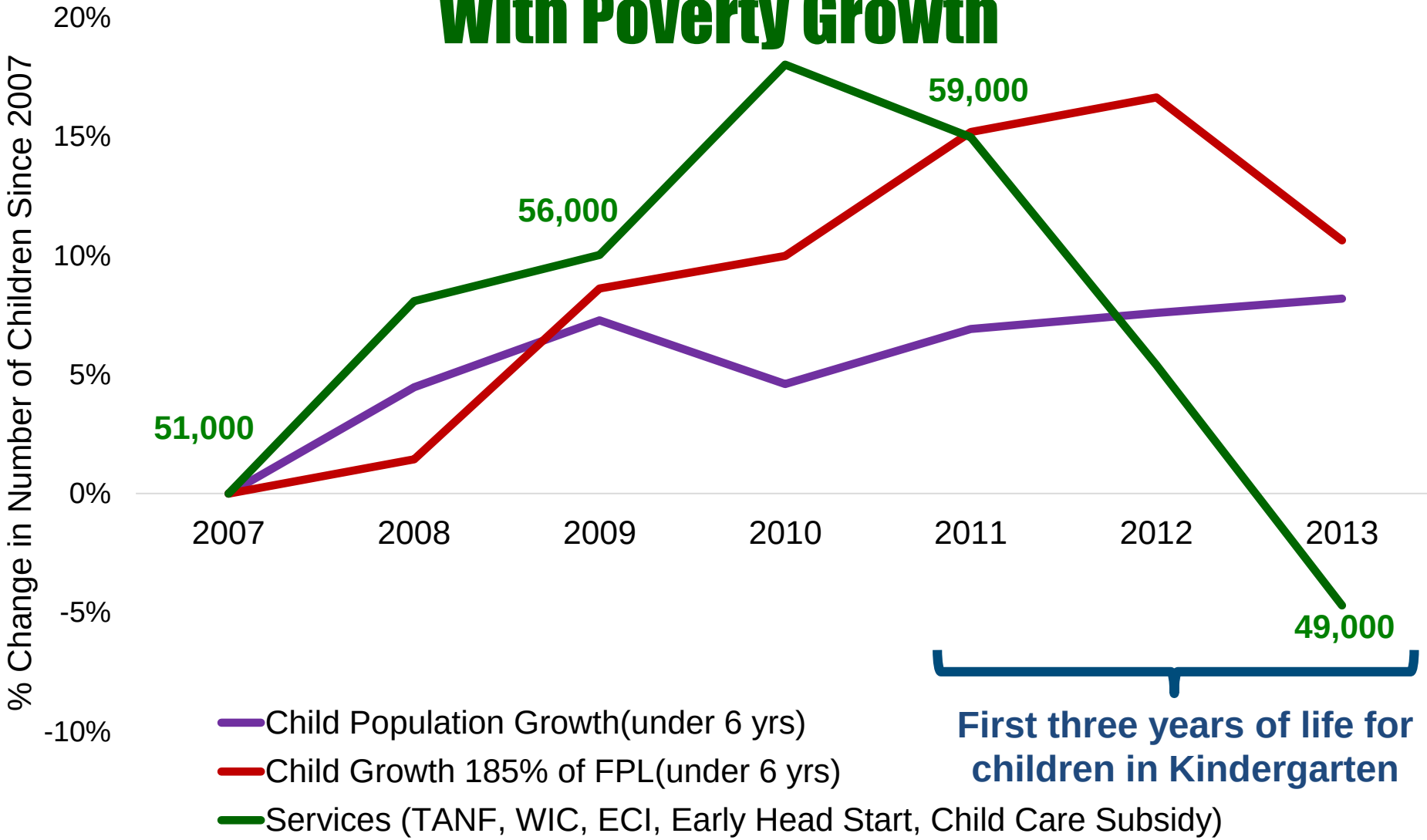

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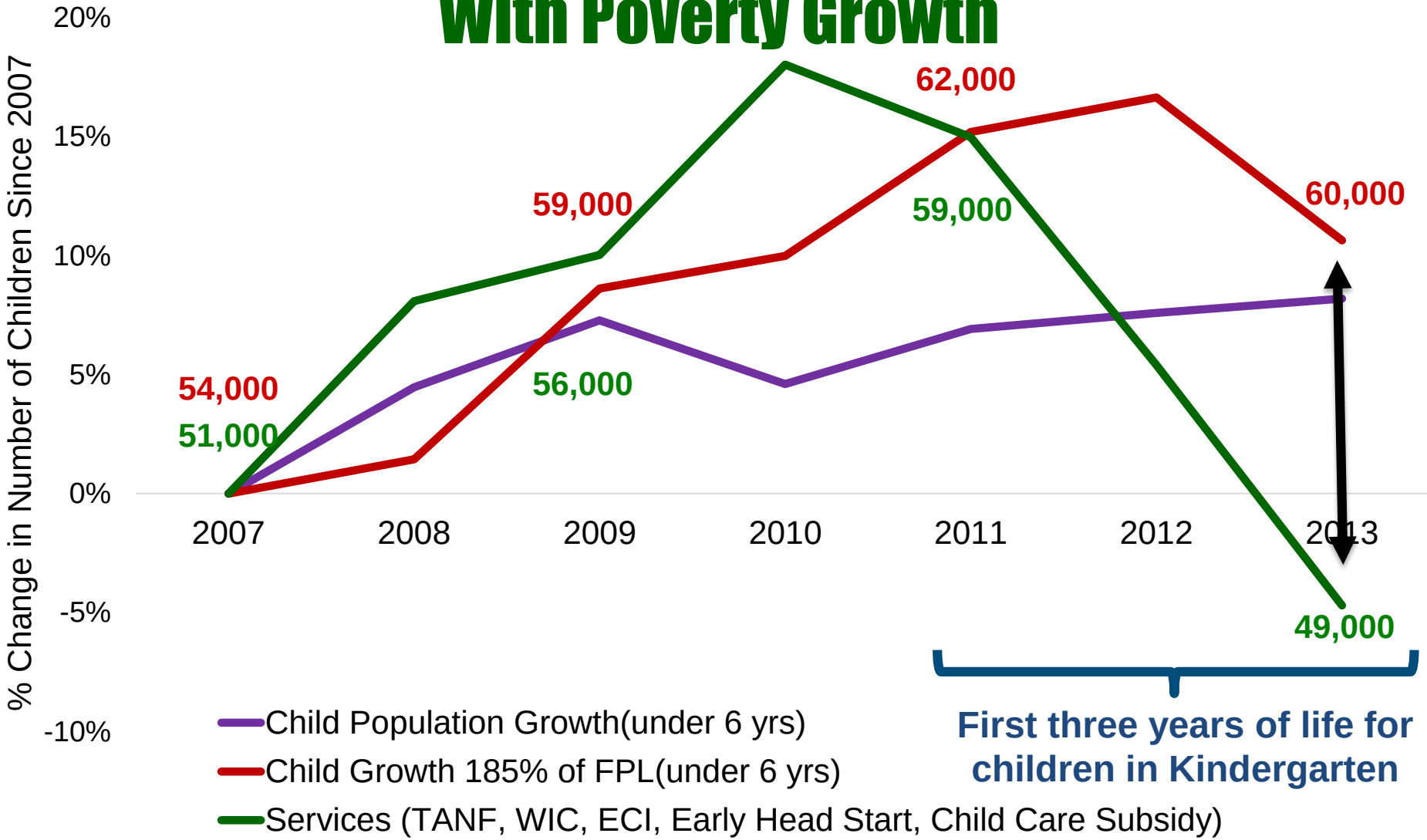

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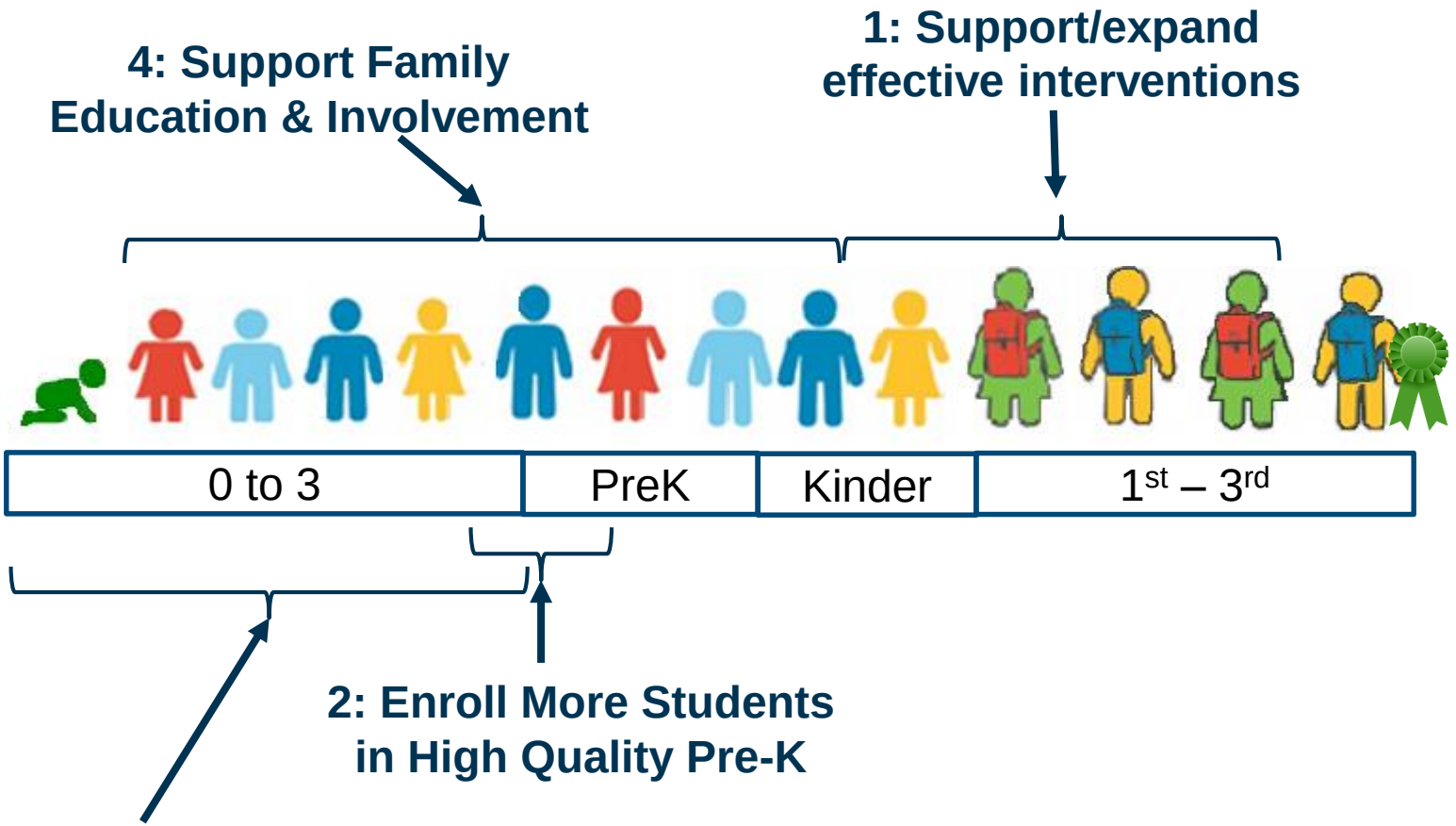
Game Plan



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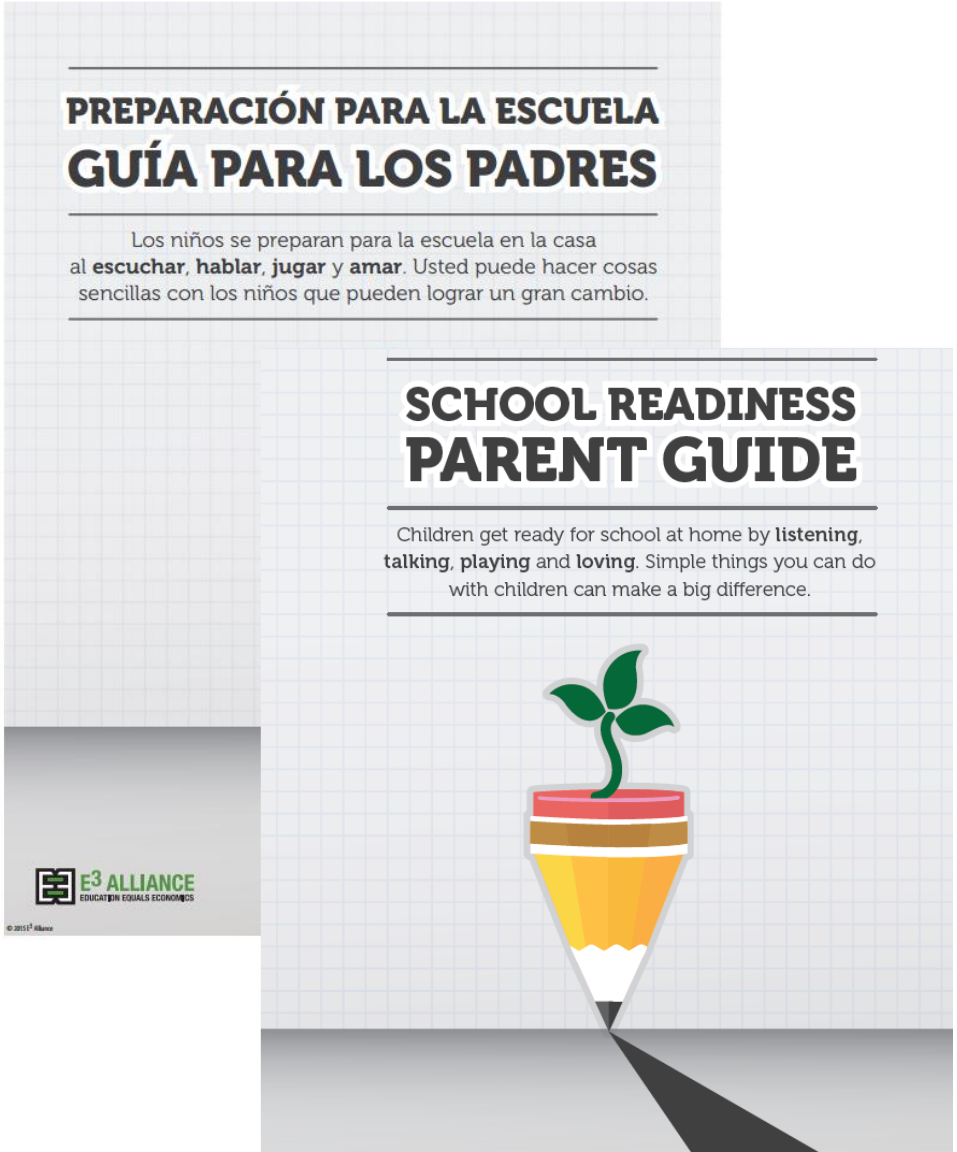
Getting Parent Guides to Families

- 25,000 Guides distributed in 2015
- Helps families understand expectations
- Help Teachers communicate



Bottom Line

- Our Early Warning has sounded: far fewer students are Kindergarten Ready.

  Without NEW action:

  - ~1,000 fewer students will be on grade at 3rd
  - Many more will come in not ready!

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Solutions

1. Support/expand effective interventions
2. Enroll More Students in High Quality Pre-K
3. Restore & Enhance Services to support children and families
4. Support Family Education & Involvement

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Panel
Working in Central Texas for Student Success

- **Michelle Harper,** President/CEO, United Way Hays County
- **Scott Wille**, Child Development Center Director, Del Valle ISD
- **Natalie Weber,** Director of Federal Programs / Texas Literacy Initiative, Taylor ISD

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Michelle Harper, President/CEO, United Way Hays & Caldwell Counties

Top three impacts of school readiness

- Engages the community, particularly the business leaders, in education
- Increases the dollar amount invested into our community
- Meaningfully engages parents in their child's education

#CTXEd

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Scott Wille, Child Development Center Director, Del Valle ISD

Top three impacts of school readiness

- Children more prepared for literacy, language and vocabulary experiences
- Strong foundations equate to strong, confident, secure students in the future
- Access to early childhood education means fewer interventions and referrals to special education in the future

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Natalie Weber, Director of Federal Programs / Texas Literacy Initiative, Taylor ISD

Top three impacts of school readiness

- Increasing Connection with parents to support school readiness
- Better alignment with child care of school readiness efforts
- Building capacity for providing comprehensive, data informed care

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Panel
Working in Central Texas for Student Success

- **Michelle Harper,** President/CEO, United Way Hays County
- **Scott Wille**, Child Development Center Director, Del Valle ISD
- **Natalie Weber,** Director of Federal Programs / Texas Literacy Initiative, Taylor ISD

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Next Steps

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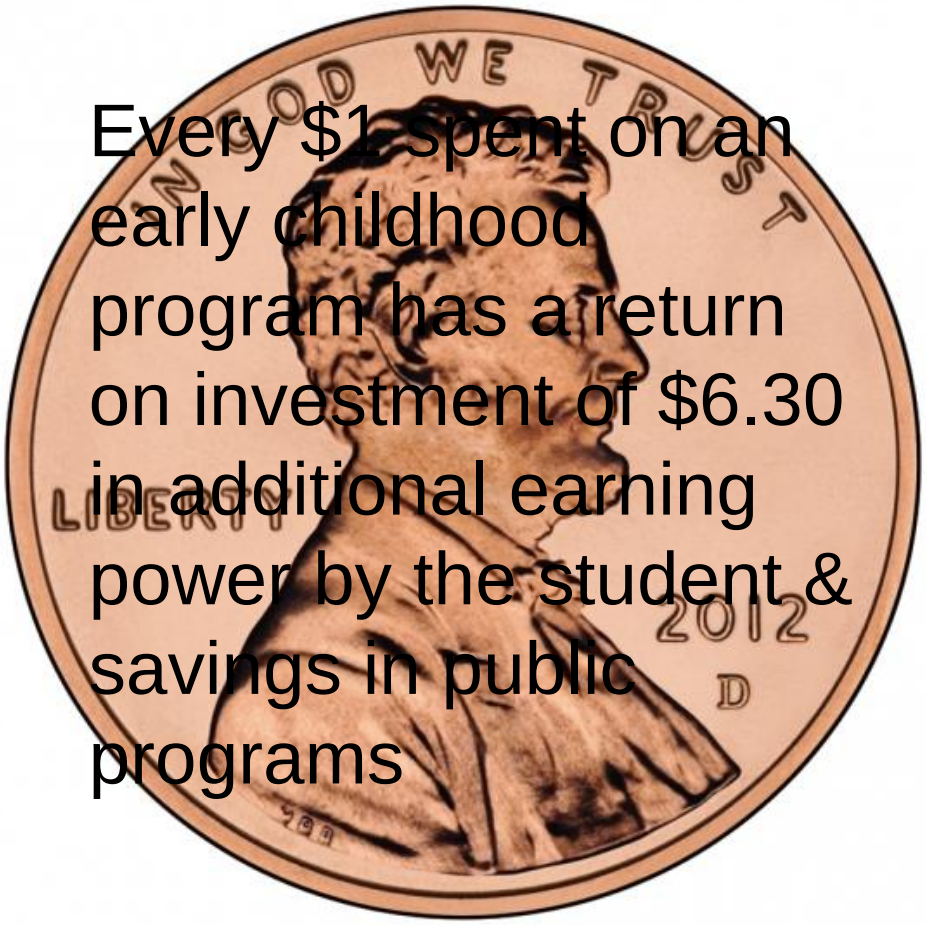
Invest In Early Education



Every $1 spent on an early childhood program has a return on investment of $6.30 in additional earning power by the student & savings in public programs

"For every $1 spent on preschool, we see a benefit of more than $6, Nobel Prize-winning economist finds" Dallas News. December12, 2016. Online: http://www.dallasnews.com/news/education/2016/12/12/every-1-spent-preschool-see-benefit-6-nobel-prize-winning-economist-finds

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