



NEW DATA SHOWS
DENVER PRESCHOOL
PROGRAM **INCREASES**
KINDERGARTEN
READINESS

STUDY FINDS HIGH QUALITY PRESCHOOL HELPS
CHILDREN ADVANCE IN DEVELOPMENTAL AREAS
KNOWN TO PREDICT FUTURE CLASSROOM SUCCESS

KINDERGARTEN: READY OR NOT?

Kindergarten is an exciting milestone in a child's life, and an important step toward their future. To make sure every child who walks into their kindergarten classroom is prepared to learn, educators are placing increasing emphasis on their development prior to kindergarten, also known as kindergarten readiness.

Although the definition of kindergarten readiness continues to evolve¹, early childhood experts agree it is a combination of social emotional and cognitive skills—such as being able to follow directions and letter recognition—that smooth the transition into the classroom.

UNDERSTANDING THE VALUE OF PRESCHOOL

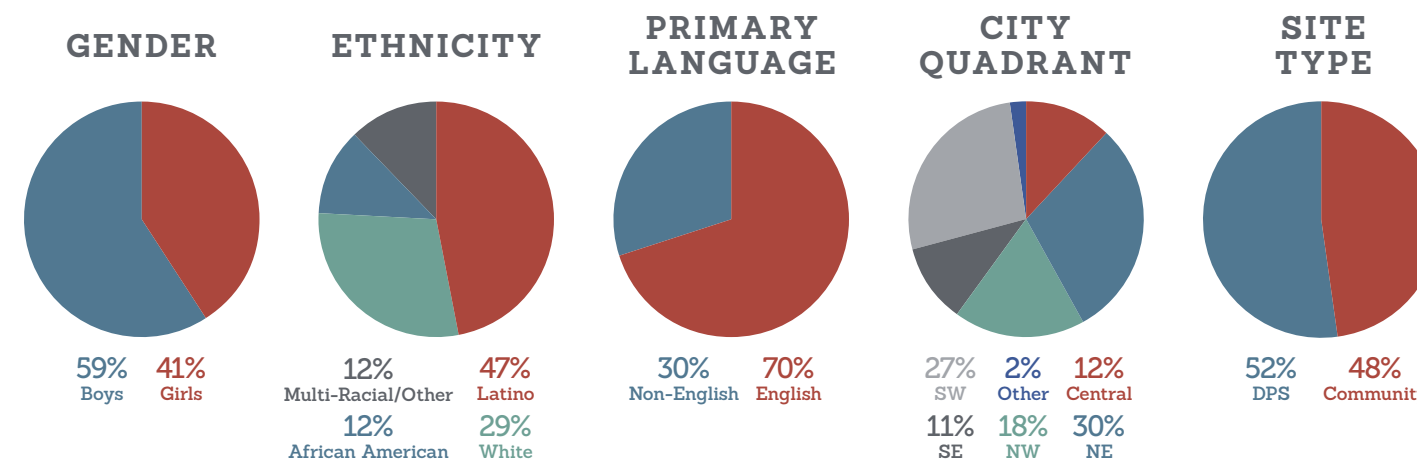
Research shows that high quality preschool is the best approach to addressing the achievement gap before it begins.² It is within these brightly decorated classrooms that all children have the opportunity to build five skills strongly associated with academic achievement: receptive vocabulary, literacy, math, social emotional development, and executive function. These indicators reflect four out of the five dimensions of readiness the National Education Goals Panel associates with later school success.³

Because the Denver Preschool Program is committed to ensuring all participants arrive at kindergarten ready to learn, it enlists Clayton Early Learning⁴ to conduct an annual kindergarten readiness study. The study evaluates how a representative sample of 200 children who participated in DPP during their preschool year progressed in five developmental areas using standardized assessments, classroom observations and parent/teacher surveys. Children are assessed in the fall and spring, and dual language learners are assessed in English and Spanish. This report examines the outcomes of the 2015-2016 preschool class.

THE STUDY ADDRESSES THREE QUESTIONS:

1. Did DPP children progress during their preschool year?
2. If yes, to what extent and in what areas?
3. Do children from different economic backgrounds and primary languages make similar progress?

CHILD DEVELOPMENT DOMAINS ASSESSED



Domains Assessed	Name of Assessment	Acronym	Language
Executive Function (Sustained Attention)	Leiter International Performance Scale-Revised, ¹ Attention Sustained Subscale	LAS	Language free
	Peabody Picture Vocabulary Test-4	PPVT	English
Receptive Vocabulary	Test de Vocabulario en Imagenes Peabody	TVIP	Spanish
	Woodcock-Johnson III Achievement Battery, ⁴ Letter-Word Identification Subtest	WJ LWI	English
Literacy Skills	Batería III Woodcock-Muñoz, Letter-Word Identification Subtest	WM LWI	Spanish
	Woodcock-Johnson III Achievement Battery, Applied Problems Subtest	WJ AP	English
Math Skills	Batería III Woodcock-Muñoz, Applied Problems Subtest	WM AP	Spanish
	Devereaux Early Childhood Assessment	DECA	Both
Social-Emotional Development			

¹Ackerman, D.J., & Barnett, W.S. (2005). *Prepared for kindergarten: What does "readiness" mean?* New Brunswick, NJ: National Institute for Early Education Research.

²Karoly, L. A., & Bigelow, J. H. (2005). *The economics of investing in universal preschool education in California.* Santa Monica, CA: RAND Corporation.

³Ragan, S. L., Moore, E., & Bredekamp, S. (Eds.). (1995). *Reconsidering children's early development and learning: Toward shared beliefs and vocabulary.* Washington, DC: National Education Goals Panel.

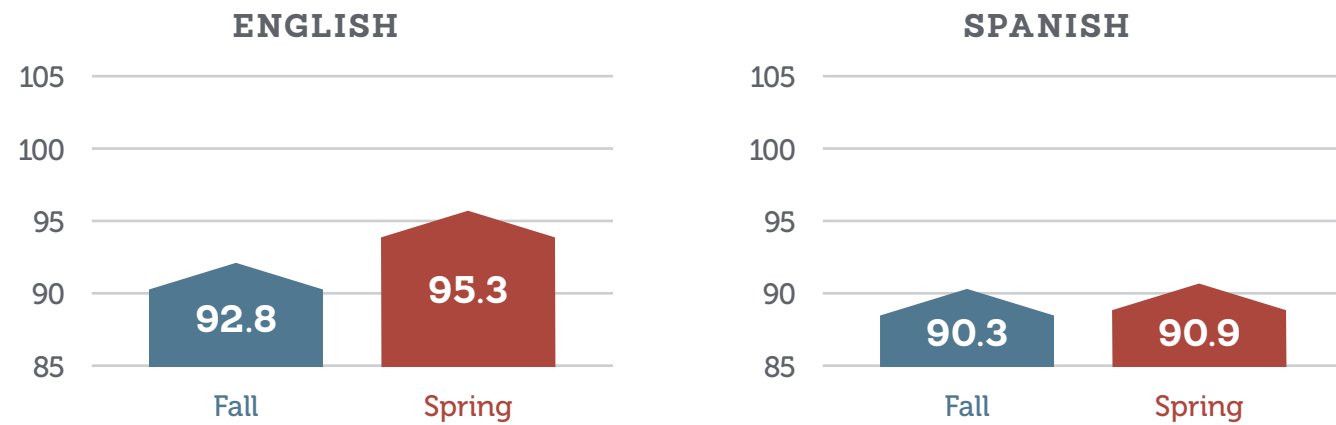
⁴Green, S. & Mangels, D. (2016). *Denver Preschool Program Child Evaluation 2015-2016: Part A: Preschool Progress and School Readiness, Evaluation Cohort 8 Preschool Report.* Denver, CO: Clayton Early Learning.

THE RESULTS

THE FOLLOWING SCORES ARE ADJUSTED FOR AGE. AS A RESULT, ANY OBSERVED INCREASE IS ABOVE AND BEYOND EXPECTED GAINS DUE TO TYPICAL DEVELOPMENT.

RECEPTIVE VOCABULARY

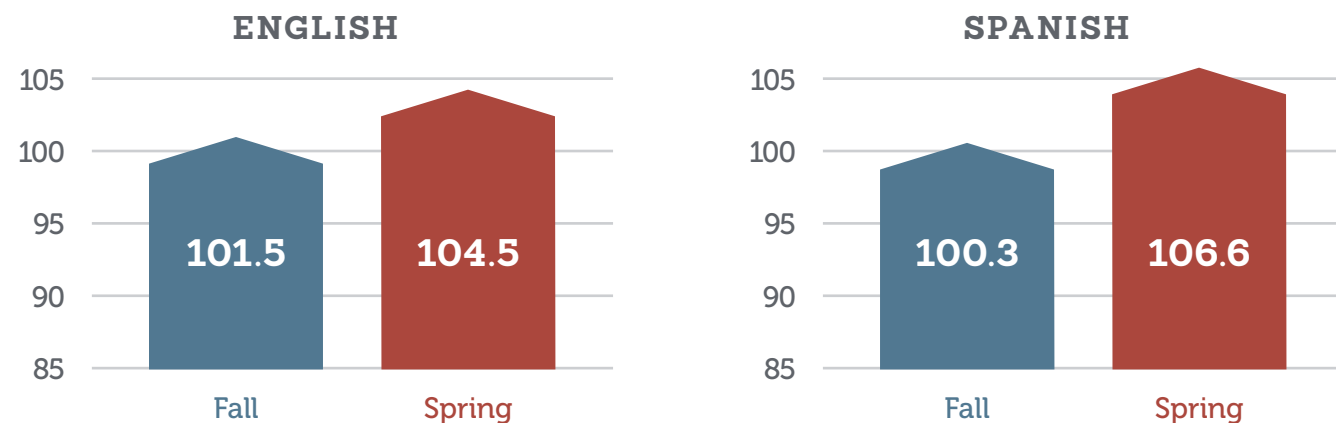
THE ABILITY TO UNDERSTAND AND RESPOND TO WORDS VERBALLY AND NON-VERBALLY⁵ DPP participants increased their average score by 2.80 points in English, and .60 points in Spanish from fall to spring based on an average score of 100.



LITERACY

THE ABILITY TO RECOGNIZE LETTERS, LETTER SOUNDS AND VOCABULARY

DPP participants increased their average score by 3.06 points in English, and 6.30 points in Spanish by the end of their preschool year based on an average score of 100.



⁵Burger, A. & Chong, I. (2011). *Encyclopedia of Child Behavior* (1st ed., p. 1231). Chicago: Springer US.

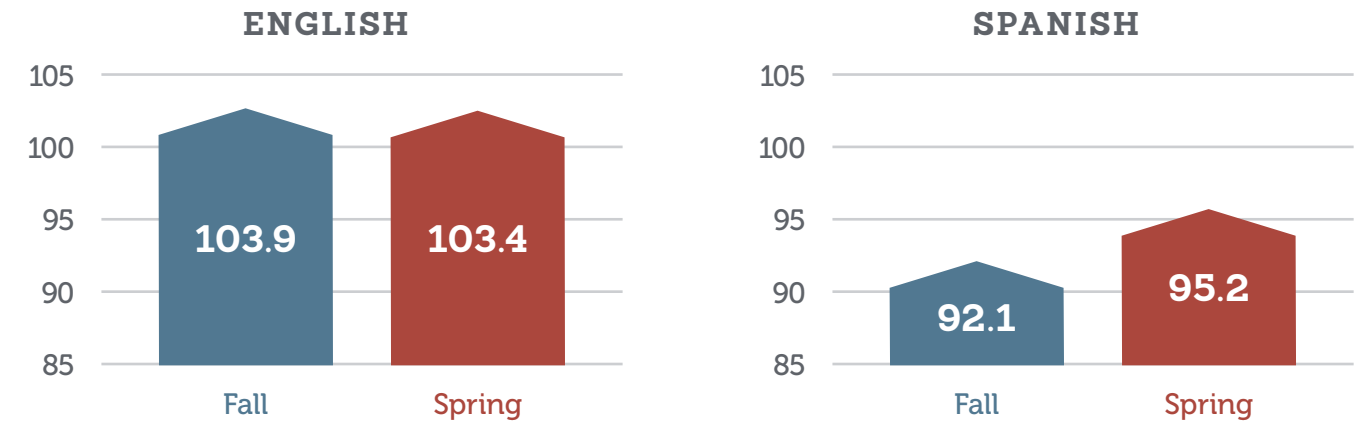
⁶Bettencourt, A., Gross, D. & Grace, H. (2016). *The Costly Consequences*

of Not Being Socially and Behaviorally Ready by Kindergarten: Associations with Grade Retention, Receipt of Academic Support Services, and Suspensions/Expulsions. Baltimore, M.D: Baltimore Education Research Consortium

MATH

THE ABILITY TO RECOGNIZE NUMBERS, COUNT, IDENTIFY QUANTITIES

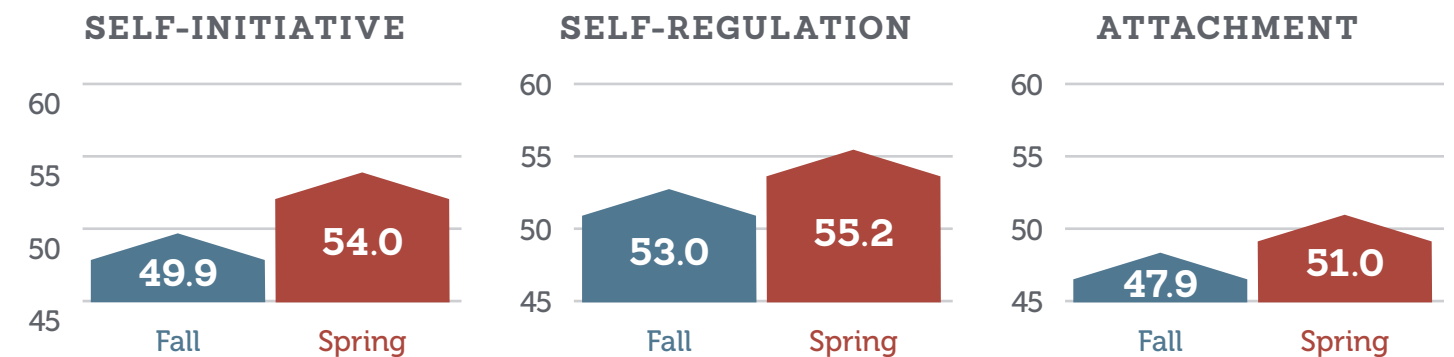
DPP participants whose primary language is English maintained scores at a developmentally-expected level, while students whose primary language is not English scored on average 3.1 points higher by the end of their preschool year based on an average score of 100.



SOCIAL EMOTIONAL DEVELOPMENT

THE ABILITY TO MANAGE BEHAVIORS AND EMOTIONS AND GET ALONG WELL WITH OTHERS⁶

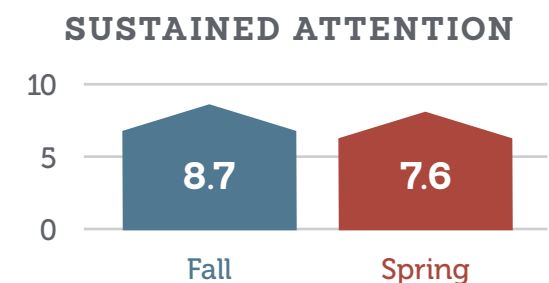
DPP participants increased their average scores in total protective behaviors (self initiative, self-regulation, and attachment) between 2.11 and 4.16 points based on the national average score of 50.



EXECUTIVE FUNCTION

THE ABILITY TO REMEMBER AND USE INFORMATION DURING AN ACTIVITY, AS WELL AS CONTROLLING THEIR BEHAVIOR AND EMOTIONS

Although DPP participants' executive function scores did not improve, their results still reflected the national average in the spring.



GETTING READY TO GROW

THE RESULTS OF THE STUDY CONFIRM THAT DURING THEIR PRESCHOOL YEAR, DPP PARTICIPANTS:

- *Showed significant progress in English literacy and vocabulary as well as vocabulary in Spanish.*
- *Improved their behavior and emotional control.*
- *Experienced gains despite differences in income.*
- *Experienced significant gains despite differences in primary language.*

NARROWING THE GAP

Although the study shows the academic achievement gap between high and low-income students persists, it also provides evidence that preschool is an effective tool to shrink it. All children who were assessed made significant improvements in one or more skill sets, regardless of their socioeconomic background.

Taking into consideration that scores were adjusted for age, these gains were especially compelling since they are above and beyond what children are expected to learn from simply growing older.

Thus, the results of this study support Denver's decision to invest in high quality preschool for local 4-year olds as a strategy to create better academic and economic outcomes within the Denver community.



IN SUMMARY, THE MAJORITY OF DPP CHILDREN ARE READY FOR SCHOOL ACADEMICALLY AND SOCIAL EMOTIONALLY.



DENVER PRESCHOOL PROGRAM

The Denver Preschool Program makes quality preschool possible for all Denver families with 4-year-old children through a dedicated sales tax first approved by voters in 2006 and renewed and expanded in 2014. DPP has provided \$80 million in tuition support to help more than 41,000 Denver children attend the preschool of their families' choice, establishing each child's foundation for lifelong learning and success.

305 Park Ave West
Suite B, Denver, CO 80205
303.595.4DPP (4377)

DPP.org

**FUNDING
QUALITY
PRESCHOOL
FOR DENVER**