In 'landmark' school study, kindergarten success is linked to achievement a decade later

Max Londberg, Cincinnati Enquirer  Published 10:14 p.m. ET  Feb. 4, 2020

Kindergarten success was linked to future academic success in a new study. In this 2019 file photo, first grader Clark Hand, left, and Anthony Beamon, a third grader, wait at their bus stop along May Street. The young students attend Sands Montessori Elementary School in Mount Washington. (Photo: Liz Dufour/The Enquirer)

Children who are ready for kindergarten have a better shot at academic success years later, even through high school, according to a new study.

The study was conducted by an initiative within United Way of Greater Cincinnati, Success by 6, and a research arm of Cincinnati Children’s Hospital Medical Center. Findings included a positive link between kindergarten readiness and several academic outcomes, some coming more than a decade after kindergarten.

Cincinnati Public Schools provided data for the study.
Researchers identified a group of about 8,000 CPS students who entered kindergarten in 2004 through 2006, which decreased to about 2,000 students by graduation due reasons such as student mobility.

The original group of students were characterized as ready for kindergarten or not based on their performance on a standardized literacy test.

Those considered ready for kindergarten were more likely to score well on third grade tests, eighth grade tests, ACT exams and had a greater likelihood of graduating on time, the study found.

Laura Mitchell, the superintendent of CPS, welcomed the study findings.

"Kindergarten readiness is a key predictor of future academic achievement. This study paints this picture so vividly, and I couldn’t be more excited about the results," Mitchell said in a statement.

Monica Mitchell, a professor of clinical psychology and behavioral medicine at Cincinnati Children's Hospital Medical Center who was involved in the research, said she hopes the results inspire parents and guardians to ensure their children are enrolled in high-quality preschool.

"I understood how important kindergarten readiness was," Mitchell said, "but to analyze the data and understand that longer term the impact held true through graduation at rates of two and three times higher ... was quite stunning."

Mitchell added that to her knowledge, this is the first study of its kind in the U.S., in that its time frame extends all the way from kindergarten through high school.

Some particular findings showed stronger correlation than others. For example, white students who passed the kindergarten test were 951% more likely to be proficient on an eighth grade standardized reading test than students who didn't pass the kindergarten test. Low-income children were 175% more likely to be proficient on the same test, and the figure was nearly 200% for black students.

Kindergarten-ready students were more than 100% as likely to graduate on time. And ACT scores were about five points higher on average for 11th grade students who had passed the kindergarten test than those who hadn't.

Leshia Lyman, the vice president of United Way’s Success by 6, has done work on early childhood education for more than a decade, occasionally hearing skeptics who question the lasting effects of kindergarten readiness.
"That's (among) the reasons we did this study," Lyman said. "That's not happening in this district."

The landmark study "exceeded our expectations," she added.

The study also found a positive link between preschool attendance and kindergarten readiness, and an even stronger link for children who attended two years of preschool versus just one.

Lyman praised support of early childhood education by the Cincinnati community, including efforts such as Preschool Promise, which launched in 2016 after voters approved a five-year levy for $15 million annually.

“This study provides additional evidence that our future investment in quality early childhood is imperative for continued success of our children,” said Chara Fisher Jackson, the executive director of Preschool Promise.

The study also provides an indication of student success in the future considering CPS students recently achieved the highest kindergarten readiness rate since tracking began, Lyman said.

Here are additional findings:

- Students ready for kindergarten were 314% more likely to be proficient on a third grade math test and 370% more likely to be proficient on a reading test.
- Students ready for kindergarten were 228% more likely to achieve proficiency on an eighth grade math test and 276% more likely on an eighth grade reading test.
- All students who attended preschool through CPS were 53% more likely to pass the kindergarten literacy test, and therefore be considered kindergarten ready. Black students who went to preschool were 66% more likely to pass the kindergarten test than their peers who did not attend preschool. Low-income students with preschool were 74% more likely to be kindergarten ready. The study identified black and low-income students as demographics of special interest.
- Low-income students ready for kindergarten were 224% more likely to be proficient in third grade math and 270% more likely to be proficient in third grade reading.
- Students ready for kindergarten completed an average of 1.6 credits more in high school (about three classes) than those who weren't kindergarten ready.
- Students ready for kindergarten were 118% more likely to graduate on time.

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