

Low IQ students learn to read at 1st-grade level after persistent, intensive instruction

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The findings of a pioneering four-year educational study offer hope for thousands of children identified with intellectual disability or low IQ who have very little, if any, reading ability.

The study by researchers at Southern Methodist University, Dallas, is the first large-scale longitudinal study of its kind to demonstrate the reading potential of [students](#) with [intellectual disability](#) or low IQ, said lead author Jill H. Allor, principal investigator of the study, which was funded by the U.S. Department of Education.

The researchers found that students with intellectual disability who participated in four years of persistent, specialized instruction successfully learned to read at a first-grade level or higher.

"This study proves that we should never give up on anyone. It raises expectations for all [children](#)," Allor said. "Traditionally the focus of instruction for students with intellectual disability has been functional skills, such as how to manage their personal hygiene, do basic chores around the house or simple work skills. This study raises academic expectations as well."

The study demonstrates there's hope for every struggling reader, said Allor, a reading researcher whose expertise is reading acquisition. The study's implications can be life-changing for non-readers and struggling readers.

"If these children, and any other struggling readers, can learn to read, that means they can go grocery shopping with a shopping list, read the labels on boxes and cans, and read basic instructions," Allor said. "Even minimal reading skills can lead to a more independent life and improved job opportunities."

The findings indicate a critical need for more research to determine ways to streamline and intensify instruction for these students, said Allor, whose research focuses on preventing reading failure among struggling readers.

"This study demonstrates the potential of students with intellectual disability or low IQ to achieve meaningful literacy goals," said Allor. "And it also clearly demonstrates the persistence and intensity needed to help children with low IQs learn to read."

Students identified with intellectual disability account for nearly one in every 100 public school students, according to the study, which cites the U.S. Department of Education. Of those identified with intellectual disability who do graduate, most don't receive a diploma, only a certificate of completion, said the study's authors, all from SMU's Annette Caldwell Simmons School of Education and Human Development.

"This article is a call for boldness and the redoubling of our efforts to truly teach all children to read," said the authors.

The researchers report the findings, "Is scientifically based reading instruction effective for students with below-average IQs?" in the journal *Exceptional Children*, published by the Council for Exceptional Children.

The study was funded with a \$3 million grant from the U.S. Department

of Education's Institute of Education Sciences. Allor, professor in the department of teaching and learning in the SMU Simmons School, was principal investigator.

Successful instruction relied on proven, scientific-based teaching method

For the study, a group of 141 children was divided into two groups. One group of 76 children received the reading intervention. A group of 65 children was taught in a business-as-usual instructional environment, which included various amounts of reading instruction and methods.

The children in the intervention group were taught reading 40 to 50 minutes a day in intensive small group settings of one to four students per teacher. Teachers used "Early Interventions in Reading," a proven curriculum designed by SMU reading specialist and study co-author Patricia G. Mathes and Allor.

Most of the students entered the study around the age of 7 and variously were identified with disabilities including Down syndrome, autism spectrum disorder, Williams syndrome or a physical disability. All of the students had the ability to speak.

IQs of the students in the study ranged from 40 to 80. IQ scores in the range of 85 to 115 are considered to be average.

Instruction was provided by six teachers certified in special education and four part-time teachers certified in general education. Teaching experience ranged from five years to 35 years.

After four years of the specialized teaching the researchers found that students with mild or moderate intellectual disability could independently read at the first-grade level, and some even higher.

Students receiving the specialized instruction significantly outperformed the comparison group on a variety of key reading tests.

Scientifically based reading program put to the test

The current study also demonstrates the effectiveness of a teaching method that's scientifically based for use with children identified with intellectual disability or low IQ, said Allor.

Mathes and Allor, former special education teachers, developed the study's reading program after research into how children with dyslexia and other learning problems learn to read.

Teachers providing the intervention received extensive support and training, the authors said. That included multi-day professional development training on curriculum implementation, monthly meetings with the research team to address instructional and behavioral issues, and instructional support from reading coaches who previously taught the intervention.

The program, previously validated with struggling readers without intellectual disability or low IQ, included a series of brief activities that increased in difficulty that were geared toward phonological awareness, letter knowledge and sounds, sounding out and sight words.

Fluency was developed from repeated reading in unison to paired reading and independent timed reading, the authors said. Comprehension activities included strategies for both listening and reading comprehension.

Students used provided materials that included word cards, small readers and activity pages to play reading games or to read aloud with someone else.

IQ is generally considered a predictor of learning ability, but in this study with students who are intellectually disabled or low IQ, the results showed that IQ didn't always predict academic achievement. Although generally students with higher IQs improved more quickly, there were many individual cases where a student with a lower IQ outperformed a student with a higher IQ, Allor said.

More information: Jill H. Allor, Patricia G. Mathes, J. Kyle Roberts, Jennifer P. Cheatham, and Stephanie Al Otaiba. "Is Scientifically Based Reading Instruction Effective for Students With Below-Average IQs?" *Exceptional Children* April 2014 80: 287-306, [DOI: 10.1177/0014402914522208](https://doi.org/10.1177/0014402914522208)

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