Foundations in Learning

Beginning in 2017, any third grader in Iowa who does not pass a basic reading assessment will repeat third grade unless they attend and pass summer school. Period. No exceptions. Dr. Robert Davis, principal at Hillside Elementary in West Des Moines, wants to make sure all of his students get to fourth grade on time.

It will be a big challenge. More than 65% of Hillside students fall below the poverty line. Student turnover at the school is between 18-20% every year. Nearly half are minority students and 19 different languages are spoken by its many ESL students.

A new reading intervention helping with fluency and decoding, called Access Code, developed in Iowa by Drs. Carolyn Brown and Jerry Zimmermann, is helping Davis reach his goal. "Jerry and Carolyn are brilliant," said Davis. If a child doesn't have these word recognition skills and cannot automatically apply them by third grade, they may never catch up, Davis explained.

Most schools teach reading using a mastery model with tools such as flashcards and lots of repetition. While effective for some students, this method does not work for many struggling readers. Access Code uses an entirely different approach to learning. Employing computer-based instruction and teacher-led activities, Access Code systematically varies the types of practice students perform in order to help them acquire and generalize word recognition skills.

Brown and Zimmermann, both Ph.Ds in Speech Pathology and Audiology, have done this before. About 25 years ago they developed another program, Breakthrough to Literacy, which was later purchased by the *Chicago Tribune*.

Although Breakthrough to Literacy was a nationally recognized, comprehensive reading program, it still left students behind. Brown and Zimmermann were intent on finding out why. They turned to an entirely different learning model that has been proven effective in many different domains; sports, medical education, music education, etc. They put together a team to determine if this learning model, the varied practice model, could help the students left behind by most every other curriculum. They developed Access Code and collaborated in its refinement and testing with two experimental psychologists at the University of Iowa, Drs. Bob McMurray and Eliot Hazeltine.

"Access Code looks at learning and the role of the teacher differently," Brown said. "It focuses on 'how' students learn rather than 'what' they must know."

Once they began to develop the program, they worked for a year with one at-risk student and her dedicated teacher in a local school. The student had experienced a number of reading interventions with little success before meeting Brown and Zimmermann. "We designed an approach that we thought might work to help her retain and generalize the skills she needed, and trained the teacher to deliver the curriculum," Zimmermann said. The student showed up 15 minutes before school every day to use the new curriculum and within a year was reading at grade level. Once Access Code was transferred to a technology program, Brown and Zimmermann worked very closely with Davis and his intervention team, testing it with high-risk students at Hillside Elementary.

Continuing Access in the Middle Grades

Those students who struggle with reading comprehension because they lack foundational skills face even greater challenges in middle school. The problem is compounded because they are no longer given reading assessments that test these foundational skills, and middle school teachers are usually not trained to identify these reading deficits. Brown and Zimmermann believe they can do something about that too. Their company, Foundations in Learning, was recently awarded a $900,000 Phase II research and development grant from the U.S. Department of Education and the Small Business Innovation Research (SBIR) program. The SBIR award is for the development of iASK, an online diagnostic assessment that will better differentiate reading problems to target the appropriate interventions.

iASK builds off what has been learned in the development and implementation of Access Code. In addition to identifying those students who lack the requisite foundational reading skills required for reading comprehension, iASK will also identify the students who may have some or many of the skills but cannot use them efficiently enough for fluent reading. Furthermore, iASK will help determine what intervention is most appropriate.

“There’s a growing awareness of the need to better serve middle school students who struggle to read. It’s a large niche for us,” Brown said. “In some of the school districts we serve, as many as fifty to sixty percent of these struggling students lack these foundational reading skills.” Brown and Zimmermann have organized an impressive team to help solve this most important problem. Drs. McMurray and Hazeltine from the University of Iowa’s Department of Psychology and Delta Center and Dr. Deborah Reed from the Florida Center for Reading Research will serve as scientists on this project. The project will be completed in the spring of 2017.

The SBIR grant is not the first award Foundations in Learning has received. As they were launching Access Code, they earned a $104,000 Iowa Demonstration Fund grant, followed by a $500,000 IEDA loan to expand the program.

If you would like to know more about how to apply for similar funding from SBIR and other sources, contact Jordan Hobfoll at IICorp, or consider attending the National SBIR/STTR Tour Bus conference in Iowa City in July that will attract federal program funders such as NASA and the National Science Foundation.