

Recent Peer-Reviewed Independent Research

Ylinen, S. & Kujala, T. (2015). <u>Neuroscience illuminating the influence of auditory or phonological intervention on language-related deficits</u>. Frontiers in Psychology, 6.

Summary: This is a review of studies that have explored the neural basis of behavioral changes induced by auditory or phonological training in dyslexia, specific language impairment (SLI), and languagelearning impairment (LLI). [Fast ForWord] Training has been shown to induce plastic changes in deficient neural networks.

Heim, S., Choudhury, N. & Benasich, A. A. (First online: 15 December 2015). Electrocortical Dynamics in Children with a Language-Learning Impairment Before and After Audiovisual Training. *Brain Topography*.

Summary: After Fast ForWord use, children with language learning impairment (LLI) showed improved language skills and changes in patterns of neural activity that indicate "a change in cognitive control strategies." This is consistent with other recent neuroscience studies on children with and without LLI (Stevens et al., 2008) and children with dyslexia (Temple et al., 2003). All of these studies suggest that the improved language and literacy performance seen after Fast ForWord use may result from better application of attentional and memory resources.

Heim, S., Keil, A., Choudhury, N., Thomas Friedman, J. & Benasich, A. (2013). <u>Early</u> <u>gamma oscillations during rapid auditory processing in children with a language-learning</u> <u>impairment: Changes in neural mass activity after training</u>. Neuropschologia, 51, 990-1001.Krishnamurti

Summary: The authors concluded that measures of brain wave efficiency are not only correlated with auditory processing problems in children with language-based learning disabilities, but that the Fast ForWord Language program improves at least one measure of the brain wave efficiency and that is in turn correlated with improvements both in rapid auditory processing accuracy and also language skills.

Krishnamurti, S., Forrester, J., Rutledge, C., & Holmes, G.W. (2013). <u>A case study of the changes in the speech-evoked auditory brainstem response associated with auditory training in children with auditory processing disorders</u>. International Journal of Pediatric Otorhinoloaryngology, 77, 594-604.

Summary: A clinical electrophysiological test of speech-evoked ABR known as BioMARK has been developed to evaluate brainstem responses to speech sounds in children with language learning disorders. Fast ForWord (FFW) was used as an auditory intervention program in the current study and pre- intervention and post-intervention speech-evoked ABR (BioMARK) measures were compared. Significant changes were noted from pre-intervention to post-intervention and reflect plasticity in the auditory brainstem's neural activity to speech stimuli.



Recent Case Studies and Briefings

Burleson Elementary earns state recognition for **double digit gains on Alabama State Reading test.** ("We wanted to help bridge the achievement gap between our students with special needs and our general education students, so we wanted to try something different.")

View case study

Highland View Elementary reduced failure rate in reading and math in Bristol City, VA (86% free/reduced lunch) View case study

K-10 struggling readers achieve 1 year, 9 months gain in only 85 days in Starkville, MS (70% free/reduced lunch) View case study

High school students improve ACT scores with Fast ForWord and Reading Assistant in Boone County Schools, KY (36% free/reduced lunch) View case study

Students achieve gains on state tests and improve graduation rate in Murray County, GA (76% free/reduced lunch) <u>View case study</u>

Working memory improvements helped all students make AYP (Haines Borough, AK) View case study



Recent Media Coverage

Jumpstarting Learning for Children in Poverty

By Dr. Eric Jensen

http://blogs.edweek.org/edweek/education_futures/2016/09/jumpstarting_learning_for_children_in_p overty.html

Contrary to popular belief, DNA is not a child's destiny. IQ is not fixed. Cognitive skills can change. This is critically important in K-12 schools because of the poverty gap -- the difference between a child's chronological age and developmental age...

... Neuroscience-based programs such as the **Fast ForWord** program, which is supported by more than 250 research studies, can help by building a child's memory, attention, and processing speed -- cognitive skills need for better reading and learning. Rather than just providing accommodations, it addresses the cause of students' difficulty -- the underlying issues that keep struggling students from making progress in school.

Wyoming's Albany County School District 1 Implements Fast ForWord Reading Program to Help Struggling

http://www.techlearning.com/thewire/-wyomings-albany-county-school-district-1-implements-fastforword-reading-program-to-help-struggling-students/2154/view

"The reasons students struggle are as varied as the students themselves, but much of it comes down to the core cognitive skills that make learning possible. This is why we selected Fast ForWord," said Weigel. "In our previous districts, Superintendent Jubal Yennie and I both saw how students' focus, confidence, and achievement improved after using the program. We are committed to helping every student, no matter what difficulties they have, and we know that Fast ForWord can help remediate the underlying difficulties that keep struggling readers from making progress."

Arizona Board of Ed to Pilot English Language Learning Software

T.H.E. Journal

https://thejournal.com/articles/2016/07/14/arizona-board-of-ed-to-pilot-english-language-learningsoftware.aspx

The Arizona Department of Education and Arizona State Board of Education conducted a competitive bidding and review process before selecting <u>Build English Fast</u> from <u>Scientific Learning Corp</u>. "Build English Fast met all of the requirements for our pilot program, including providing individualized, adaptive instruction in the five strands of literacy; integrated assessment; and alignment with Arizona's



academic and English language proficiency standards," said Kelly Koenig, deputy associate superintendent with the ADE Office of English Language Acquisition Services, in a news release.

Arizona Tries Tech-Based English Language Learner Program

By Steve Goldstein, KJZZ

http://theshow.kjzz.org/content/357376/arizona-tries-tech-based-english-language-learner-program

For a number of years, Arizona educators have been working to figure out the best—and swiftest—ways to get young English Language Learners, or ELL, up to speed. A two-year pilot program was recently launched by the Arizona Department of Education in tandem with the State Board of Education focusing on a tech-based language development program.

Taking A Three-Pronged Approach To Help ELLs Excel

By Nancy McGee, Grand Prairie ISD

http://inservice.ascd.org/taking-a-three-pronged-approach-to-help-ells-excel/

Cognitive development is targeted using a software program called <u>Fast ForWord</u> from Scientific Learning. It is a research-based program designed by neuroscientists to target language acquisition and literacy by building on the concept of neuroplasticity—the brain's ability to reorganize itself and form new neural pathways. ELL and at-risk students spend a minimum of 150 minutes per week in our Fast ForWord literacy and language acquisition labs to build memory, attention, sequencing and processing skills, and vocabulary development.

Since GPISD expanded the program's use to include ELLs a year and a half ago, students have shown a 1.7-year improvement in English reading levels annually, and have also strengthened their first language growth through neuropathway development. Success on standardized tests has also been attributed to Fast ForWord due to the rapid increase in reading levels our students have experienced. With improved cognitive skills and vocabulary, students are understanding and retaining more content knowledge as well.

TEN TO TEEN: SEVEN WAYS TO HELP STRUGGLING READERS

By Carole Meyer, Spokane Public Schools



Those who used Fast ForWord achieved average gains of two to four points on the MAP—more than twice as much growth as their peers who did not use the program. Also examined were data from Reading Progress Indicator, a computerized assessment designed to measure the impact of the Fast ForWord products, as well as the STAR Reading assessment. While these students were all Level 1 and Level 2 readers, they achieved more than a year of growth in only one semester. Three separate



semesters of growth data revealed average reading gains ranging from 1.4 to 1.7 grade levels in the Fast ForWord program, and 1.1 to 2.1 grade levels on the STAR Reading assessment.

Students make grade level jumps with Fast ForWord

http://www.theadvertiser.com/story/news/2016/05/09/students-make-grade-level-jumps-fast-forword/84150950/

The Lafayette Parish School System will recognize student progress using Fast ForWord at Wednesday's board meeting. A total of 878 students gained one grade equivalency or more on the program this year. A total of 298 students gained between 2.0 and 2.9 grade equivalencies. Eighty nine students gained 3.0 to 3.9 grade equivalencies, 30 students gained 4.0 to 4.9 grade equivalencies, two students gained 5.0 to 5.9 grade equivalencies and two students gained eight or more grade equivalencies.

Fast ForWord and Reading Assistant chosen to improve reading scores

<u>http://www.districtadministration.com/content/ocean-beach-school-district-washington-state-chooses-fast-forword-accelerate-reading-growth</u>

"In the past, our interventions primarily focused on reading fluency but that doesn't necessarily help with comprehension or other components of literacy. Fast ForWord allows us to hit a much broader spectrum of skills that students need to become good readers and to improve their performance in all areas," said Huntley.

Special needs students contributing to Hartselle's reading scores

http://www.decaturdaily.com/news/local/special-needs-students-contributing-to-hartselle-s-reading-scores/article 2e4efa78-02ac-5008-8507-aec716c28937.html

At Burleson, where the reading intervention program started almost two years ago, reading scores for special needs students improved by 25 percent in one semester.

Resource teachers Tara Hamlett and Nicole McDonald said they were stunned with the results. "We could see the improvements, but we did not expect this," Hamlett said.

Crestline Elementary added the program a semester later, and students showed a 16 percent increase in reading scores, while Hartselle Intermediate had a 12 percent gain. Hartselle's gains came while the majority of students in the six public school districts in Lawrence, Limestone and Morgan counties continued to score below state averages in most grade levels and at just about every indicator.



Fast ForWord From Scientific Learning Receives Second Consecutive Readers Choice Award from District Administration

<u>http://www.districtadministration.com/content/fast-forword-scientific-learning-receives-second-consecutive-readers-choice-award-district</u>

"Maintaining a high level of achievement is difficult," said Dr. Vickie Reed, superintendent of Murray County Public Schools in Chatsworth, Georgia. "We use Fast ForWord not only to address the needs of struggling readers, but to support all students to help them meet and exceed the standards in reading. In our own research, we see a strong correlation between students' use of the Fast ForWord program and improved performance on state tests."

Alachua County, FL rolls out 'neuroplasticity' language development programs

http://www.eschoolnews.com/2015/03/06/language-development-563/?ps=carmes@scilearn.com-0013000000j06af-0033000000q5R95



2014-2015 Statewide Results

Louisiana State Results

Louisiana students show 1 to 1.2 years of gain after 5 to 6 months of reading intervention. <u>View Educator's Briefing</u> **2**

Mississippi State Results

Mississippi students more than double their rate of reading growth after interventions. View Educator's Briefing •

Texas State Results

Texas students show 1.2 years of reading growth after 5 months of intervention. View Educator's Briefing •

California State Results

California students show 1 year in reading growth after 5 months of intervention. View Educator's Briefing •

Florida State Results

Florida students show 9 months gain after 5 months of reading intervention. View Educator's Briefing •

Georgia State Results

Georgia students show 9 months of gain after 4 months of reading intervention. <u>View Educator's Briefing</u>