

EMPIRICAL EVIDENCE SUPPORTING FAST FORWARD

Gemm Learning’s primary program, Fast ForWord, is far and away the most scrutinized educational software in the world. 240+ formal studies use a wide variety of:

- formats – some pre-screen candidates while others select randomly,
- protocols – from 50 to 90 minute protocols, 4-5 days over a few or many weeks, and
- follow up testing – some immediate, others months later.

Many have been published in major peer-reviewed journals or have been scrutinized by the doctoral committees of students working towards their doctoral degrees. School studies typically require independent data gathering and are carefully reviewed by the district prior to being submitted to Scientific Learning.

Here are some typical results.

STUDY	PARTICIPANTS	RESULTS
Nevada State Dept of Education	State-wide study over 2 years covering 3 rd to 12 th grade involving dozens of reading and math programs. Study managed by outside consultants.	FFW programs showed the highest gain of all the reading programs, which includes all leading reading programs including READ 180, Lexia and others. FFW posted a gain that was over 2x the median gain. It was ranked “High Gain” in the study report.
Marion	349 5th-6th graders (215 FFW; 134 comparison)	FFW students scored significantly higher in language and reading (Terra Nova test) than the comparison group.
Miller, et al.	452 academically at-risk K-3rd graders (288 FFW; 164 comparison)	FFW students demonstrated a statistically greater gain than comparison group students in auditory comprehension and phonemic awareness (TACL and PAT tests).
Slattery	60 3rd-5th graders reading below grade level (30 FFW; 30 comparison)	FFW students made significantly greater gains in phonemic awareness and reading ability than the comparison group (Yopp-Singer and QRI-II tests).
Waupun, WI	46 middle school students performing at grade level (32 FFW; 14 comparison)	Students using FFW made significant improvements in listening comprehension relative to the comparison group, and improved their scores by nearly two-thirds of a standard deviation (from 101.2 to 110.3).
Springfield City SD/Kenwood ¹	100 1 st and 2 nd graders in an urban elementary school (50 FFW; 50 comparison)	Average improvements of FFW participants on both the phonological awareness and letter-sounds portions of the TOPA assessments were significantly greater than the improvements of the control group.

¹ Note that this data was also analyzed as part of the Reading 1 product report, combined with data from two other school districts.

Manchester, TN	161 first- and second-grade students in a rural elementary school (85 FFW; 76 comparison)	On average, students made significant improvements on the various assessments, with percentiles improving as much as 25 units on the TOPA and 13 units on the DRP.
Boone, KY	97 students, grades 2 through 5 from suburban elementary schools (43 FFW; 54 comparison)	On average, the students who participated in the study made improvements on the Reading portion of the Scranton Performance Series.
Pocatello, ID	34 students used FFW to Reading products sequentially; 20 students served as a comparison group.	On average, the Fast ForWord participants at Franklin Middle School made significant gains in reading skills on the Gates-MacGinitie Reading Tests. In four months, they gained more than one year in vocabulary and comprehension skills, making significantly greater gains than the comparison group.
Hicksville, OH	149 fifth and sixth graders from a rural elementary school (62 FFW; 87 comparison)	On average, the Fast ForWord participants at Hicksville Elementary School made gains in reading skills on the Gates-MacGinitie Reading Tests, gaining nearly a year in comprehension skills in just four months.
Washington Local, OH	152 seventh graders from an urban junior high school (84 FFW; 68 comparison)	On average, the Fast ForWord participants at Jefferson Junior High School made significant gains in reading skills on the Gates-MacGinitie Reading Tests, gaining over half a year in vocabulary and comprehension skills.
School District #16, Canada	121 2 nd graders (75 FFW; 46 in comparison group). Some of the students from each group were in a French immersion program.	On average, the Fast ForWord group significantly outperformed the comparison group on the TACL-3 subtests. Average improvement on the subtests for the Fast ForWord group was nearly one standard deviation, with the group's overall language score moving from the 45 th percentile to the 81 st percentile.

Notes to Table: Participant count is only participants whose results were evaluated in pre/post score differences.

Peer-Reviewed University Studies of Fast ForWord Products

Summaries of many of the studies are available on university websites and the Scientific Learning site at www.scilearn.com/results. A list of selected university-based peer-reviewed studies follow:

Widener University

Slattery, C.A. (2003). The Impact of a Computer-Based Training System on Strengthening Phonemic Awareness and Increasing Reading Ability Level..

abstract: <http://muse.widener.edu/~egrozyck/Dissertations/Slattery.html>.

East Tennessee State University

Marion, G.G. (2004). An Examination of the Relationship Between Students' Use of the Fast ForWord Reading Program and Their Performance on Standardized Assessments in Elementary Schools. Doctor of Education dissertation, East Tennessee State University.

full report: <http://etd-submit.etsu.edu/etd/theses/available/etd-0331104-180636/>.

Stanford University

Temple, E., Deutsch, G. K., Poldrack, R. A., Miller, S.L., Tallal, P., Merzenich, M. M., & Gabrieli, J. D. E. (2003). Neural deficits in children with dyslexia ameliorated by behavioral remediation: Evidence from functional MRI. *Proceedings of the National Academy of Sciences*, 100(5), 2860-2865.*

full report: <http://www.pnas.org/cgi/content/abstract/0030098100v1>

Rutgers University / University of California, San Francisco (before Scientific Learning)

Merzenich, M. M., Jenkins, W. M., Johnston, P., Schreiner, C., Miller, S. L., & Tallal, P. (1996). Temporal processing deficits of language-learning impaired children ameliorated by training. *Science*, 271(5245), 77-81.

Full report: <http://www.sciencemag.org/> (subscription required)
