

October 29, 2019

Dear Readers,

There have been numerous research studies conducted using the Fast ForWord and Reading Assistant software products. The Scientific Learning website www.scientificlearning.com/results provides a link or direct access to many of these studies. Some studies have used experimental designs, including the use of random assignment, while others have been intervention group studies or case studies. The purpose of this document is to provide an organized list of the studies that used an experimental design. This document also provides basic information about each study such as whether it had rapid follow-up showing student benefit after just a few weeks, or whether the design was longitudinal showing the enduring benefits of the products over the years.

Several studies have been published in major peer-reviewed journals such as *Science* and the *Proceedings of the National Academy of Sciences* while others have been scrutinized by the doctoral dissertation committees of students working towards their doctoral degrees.

In addition to traditional journal-based peer-review, Fast ForWord software has been positively reviewed by the What Works Clearinghouse, established in 2002 by the Department of Education as a central and trusted peer-reviewed source of scientific evidence of what works in education. Their review included several independent studies on the Fast ForWord products and found many that met the highest research standards of the Clearinghouse.

Using funding from the US Department of Education's Office of Special Education Programs (OSEP), the National Center on Response to Intervention (NCRTI) was established by the American Institutes for Research and researchers from Vanderbilt University and the University of Kansas (2007-2012). Also funded by OSEP, the National Center on Intensive Interventions (NCII) is housed by the American Institutes for Research. The Centers provide guidance to educators on implementing proven models for Response to Intervention (RTI), Intensive Intervention, and Early Intervening Services (EIS). The reviews of the NCRTI and NCII found that the Fast ForWord Language Series products have "Positive and Substantively Meaningful Results" with a medium to large effect size when used as an "Academic Intervention."

Finally, we have results from numerous studies where schools or districts independently gather data and request Scientific Learning's assistance on the analysis and reporting. These reports are reviewed for accuracy by educators at the district prior to being shared with others.

Across all the studies, data from more than 100,000 students at 1,000 schools have been analyzed and reported. Few studies manage to incorporate all the best attributes of a well-designed study, but many studies incorporate each of the important attributes.

Several appendices have been attached to help organize the research conducted on the Fast ForWord and Reading Assistant software.

Appendix 1 provides a reference for many of the studies on the Fast ForWord and Reading Assistant products.

Appendix 2 documents the studies that have comparison groups, some with random assignments, and reports the results of those studies.

Appendix 3 documents published university-based studies that underwent peer review.

Please note that many of the studies described on the following pages are available on our website, or through links on the company's website (www.scilearn.com/results). If you have additional questions or comments about this document, please send an e-mail to: research@scilearn.com.

Appendix 1

The table starting on the next page shows the depth and breadth of the studies on the Fast ForWord and Reading Assistant products. Study descriptors have been included.

Notes and Abbreviations for reading table:

<u>Research Design:</u>	<u>Duration:</u>
RCT – Randomized Controlled Trial QED – Quasi-Experimental Design IGS – Intervention Group Study (non-experimental design) Literature Review – Overview or review of existing literature	Long – more than one year Mid – 1 semester to 1 year Short – less than 1 semester (4.5 months)
<u>Publications:</u>	
Dissertation – reviewed by committee MPRJ – major peer-reviewed journal RP – reviewed by peers as part of proceedings WP – white paper	
<u>Researchers:</u>	
Independent – Researchers are financially independent of Scientific Learning (they may be based at a university) University – Researchers are based at a university Clinic-based studies – clinic designed study, administered all assessments and collected all data School-based studies – school designed study, administered all assessments and collected all data SLC – Scientific Learning designed study, assisted with test administration or scoring	

Appendix 1, continued

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Heim, S., Choudhury, N., Benasich, A.A. (2016). Electrocortical dynamics in children with a language-learning impairment before and after audiovisual training. <i>Brain Topography</i> , 29(3), 459-476.	QED	Short	MPRJ	NY/NJ	Independent
Zou, P., Conklin, H.M., Scoggins, M.A., Li, Y., Li, X., Jones, M.M., Palmer, S.L., Gajjar, A., & Ogg, R.J. (2016). Functional MRI in medulloblastoma survivors supports prophylactic reading intervention during tumor treatment. <i>Brain Imaging and Behavior</i> , 10(1)258-271.	RCT	Long	MPRJ	TN	Independent
Corbitt, C., Hutchinson, B., Hutchinson, C., Parsons, L., & Pickford, T. (2015). Improved language and literacy skills in state primary schools in Western Australia. <i>Open Science Journal of Education</i> , 3(5), 32-37.	RCT	Short	MPRJ	n/a	Clinic-based
Fischer, S. (2015). Use of the Fast ForWord Language program to improve reading scores of secondary level Special Education students. Doctor of Education dissertation. Capella University.	IGS	Short	Dissertation	NY	Independent
Ylinen, S. & Kujala, T. (2015). Neuroscience illuminating the influence of auditory or phonological intervention on language-related deficits. <i>Frontiers in Psychology</i> , 6.	Literature Review	n/a	MPRJ	n/a	Independent
Szelag, E., Skolimowska, J. (2014). Time perception in aging: Age-related cognitive and temporal decline is reduced by intensive temporal training. <i>Procedia - Social and Behavioral Sciences</i> 126:109-110.	RCT	Short	MPRJ	n/a	Independent
Scientific Learning. (2014). Students with better RA implementations show greater gains.	IGS	Mid	WP	IL	School-based
Boone County School District. (2013). High school students in Kentucky improve ACT Reading scores after Reading Assistant use. <i>Scientific Learning Research Briefings</i> : 17(7).	IGS	Mid	WP	KY	School-based
Björn, P.M., Leppänen, H.T. (2013). Accelerating decoding-related skills in poor readers learning a foreign language: a computer-based intervention. <i>Educational Psychology: an International Journal of Experimental Educational Psychology</i> , 33(6). DOI:10.1080/01443410.2013.797336	QED	Short	MPRJ	n/a	University

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Downington Area School District. (2013). 33% of Fast ForWord participants at Downington Area School District increase PSSA Reading Level. Scientific Learning: Educator Briefings: 17(8).	IGS	Mid	WP	PA	School-based
Flushing Community Schools. (2013). Improved Reading Skills and Achievement by Students in the Flushing Community Schools who used Fast ForWord® Products: 2011-2012, Scientific Learning: Research Reports, 17(9).	IGS	Mid	WP	MI	School-based
Fulton City School District. (2013). Improved Reading Skills and Achievement by Second Graders in the Fulton County Schools who used Fast ForWord® Products: 2012-2013, Scientific Learning: Research Reports, 17(4)1-6.	IGS	Mid	WP	NY	School-based
Heim, S., Keil, A., Choudhury, N., Thomas Friedman, J., Benasich, A.A. (2013). Early gamma oscillations during rapid auditory processing in children with a language-learning impairment: Changes in neural mass activity after training. <i>Neuropsychologia</i> , 51(5)990-1001.	QED	Short	MPRJ	n/a	University
Krishnamurti, S., Forrester, J., Rutledge, C., Holmes, G.W. (2013). A case study of the changes in the speech-evoked auditory brainstem response associated with auditory training in children with auditory process disorders. <i>International Journal of Pediatric Otorhinolaryngology</i> , 77(4)594.604.	IGS	Short	MPRJ	n/a	University
Miller Place Union Free School District. (2013). Improved Reading Achievement and Academic Skills by Students in the Miller Place Free Union School District who used Fast ForWord® Products: 2011-2012, Scientific Learning: Research Reports, 17(3)1-5.	IGS	Long	WP	NY	School-based
Rogowsky, B.A., Papamichalis, P. Villa, L., Heim, S., & Tallal, P. (2013). Neuroplasticity-based cognitive and linguistic skills training improves reading and writing skills in college students. <i>Frontiers in Psychology</i> , 4(137)1 – 11.	QED	Short	MPRJ	NJ	University
St. Charles Parish Public Schools. (2013). Improved Academic Achievement by Students in the St. Charles Parish Public Schools who used Fast ForWord® Products and Reading Assistant Software: 2010-2012, Scientific Learning: Research Reports, 17(5)1-7.	QED	Long	WP	LA	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
St. Mary Parish Schools. (2013). Improved Longitudinal Achievement in English Language Arts, Math, Science, and Social Studies by Students in St. Mary Parish Schools who used Scientific Learning Products, Scientific Learning: Research Reports 17(6): 1-8.	IGS	Long	WP	LA	School-based
Chamberlain School District (2012). Improved Reading Skills by Students in the Chamberlain School District who used Fast ForWord® Products: 2008-2011, Scientific Learning: Research Reports, 16(5)1-5	IGS	Mid	WP	SD	School-based
Craven County Schools. (2012). Improved Reading Achievement by Students in the Craven County Schools who used Fast ForWord® Products: 2009-2011, Scientific Learning: Research Reports, 16(12)1-10.	QED	Long	WP	NC	School-based
Davenport Community Schools. (2012). Preschoolers in Davenport, IA, improve language skills from 41st to 62nd percentile, MAPS for Learning: Educator Briefings 16(3).	RCT	Long	WP	IA	School-based
Hilton Central School District. (2012). Improved Reading Skills and Achievement by Students in the Hilton Central School District who used Fast ForWord® Products: 2011–2012, Scientific Learning: Research Reports, 17(2)1-5.	IGS	Mid	WP	NY	School-based
Hoke County Schools. (2012). Improved Reading and Math Achievement by Students in the Hoke County Schools who used Scientific Learning Products: 2011-2012, Scientific Learning: Research Reports, 16(11)1-6.	IGS	Mid	WP	NC	School-based
Mechanicville City School District. (2012). Mechanicville, NY students significantly improve fluency and language skills, MAPS for Learning: Educator Briefings 16(8).	IGS	Mid	WP	NY	School-based
Merrillville Community School Corporation. (2012). Improved Reading Achievement and Skills by Students in the Merrillville Community School Corporation who used Fast ForWord® Products: 2011-2012, Scientific Learning: Research Reports, 16(10)1-7.	IGS	Mid	WP	IN	School-based
Murray County Schools. (2012). Improved Reading Skills and Performance on High School Exit Exams by Students in the Murray County Schools who used Fast ForWord® Products: 2010-2012, Scientific Learning: Research Reports, 16(13)1-5.	IGS	Long	WP	GA	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
St. Mary Parish. (2012). Improved Longitudinal Achievement in English Language Arts, Math, Science, and Social Studies by Students in St. Mary Parish who used Fast ForWord® Products, Scientific Learning: Research Reports 16(2): 1-9.	IGS	Long	WP	LA	School-based
Woodrum, J, Ed.D. (2012). Improved Academic Achievement: Fast ForWord and the Bulloch County Schools Pilot, an Independent Study. Bulloch County Schools, Statesboro, Georgia.	IGS	Mid	WP	GA	School-based
Clark County School District. (2011). Improved Reading Achievement by Students in the Clarke County School District who used Fast ForWord® Products: 2006 - 2011, MAPS for Learning; Educator Reports 15(4): 1-8.	QED	Long	WP	GA	School-based
Everett Public Schools. (2011). English Language Learners in Everett, Massachusetts, Show Improved English Proficiency After Fast ForWord Use. Scientific Learning: Research Briefings. 15(1). 2011.	IGS	Long	WP	MA	School-based
Grand Forks Public Schools. (2011). Improved Reading Skills and Academic Achievement by Students in the Grand Forks Public School District who used Fast ForWord® Products: 2009-2010. Scientific Learning: Research Reports. 15(11): 1-8. 2011.	QED	Short	WP	ND	School-based
Hamilton County Department of Education. (2011). Improved Reading Skills and Achievement by Students in the Hamilton County Department of Education who used Fast ForWord® Products: 2010-2011. Scientific Learning: Research Reports. 15(5): 1-6. 2011.	IGS	Mid	WP	TN	School-based
Hamilton County Department of Education. (2011). Tennessee students in early elementary improve reading skills by more than 1 year in 4 months. Scientific Learning: Research Briefings. 15(10). 2011.	IGS	Short	WP	TN	School-based
Lake Wales Charter Schools. (2011). Improved Reading and Math Achievement by Students in the Lake Wales Charter Schools who used Fast ForWord® Products: 2009 – 2010. Scientific Learning: Research Reports. 15(14): 1-7.	IGS	Mid	WP	FL	School-based
Marion County Public Schools. (2011). Improved Reading Achievement and Language Skills by Students in the Marion County Public Schools who used Fast ForWord® Products and/or Scientific Learning Reading Assistant: 2010-2011. Scientific Learning: Research Reports. 15(7): 1-6. 2011.	IGS	Mid	WP	FL	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Montgomery County Public Schools. (2011). Student reading skills jump from 17 th to 26 th percentile after Fast ForWord participation. Scientific Learning: Research Briefings. 15(8). 2011.	IGS	Short	WP	KY	School-based
New Rochelle City School District. (2011). New Rochelle High School students improve reading skills by more than 1 year in less than 4 months. Scientific Learning: Research Briefings. 15(15). 2011.	IGS	Short	WP	NY	School-based
Palmyra Area School District. (2011). Improved Reading Achievement and Skills by Students in the Palmyra Area School District who used Fast ForWord® Products: 2009-2011. Scientific Learning: Research Reports. 15(12): 1-6.	IGS	Mid	WP	PA	School-based
School District 16. (2011). Fast ForWord Generating Literacy Gains at Bonar Law Memorial High School, Canada. Scientific Learning: Research Briefings. 15(9). 2011.	IGS	Short	WP	NB, Can	School-based
Scientific Learning Corporation. (2011). After Reading Assistant use, students improve reading level 50% beyond expected gains. Scientific Learning: Research Briefings. 15(16). 2011.	IGS	Mid	WP	n/a	SLC
Scientific Learning Corporation. (2011). In Response to a Meta-Analysis by Strong et al. Scientific Learning: Research Reports. 15(3). 2011.	Literature Review	n/a	WP	n/a	SLC
Scientific Learning Corporation. (2011). Reading Progress Indicator predicts success on the End-of-Grade Reading test. Scientific Learning: Research Briefings. 15(2). 2011.	IGS	n/a	WP	NC	SLC
West Jefferson Hills School District. (2011). Pennsylvania school sees reading achievement jump for Fast ForWord and Reading Assistant participants. Scientific Learning: Research Briefing. 15(13). 2011.	IGS	Long	WP	PA	School-based
Worcester Public Schools. (2011). Fast ForWord helps students classified as LEP, Special Education, General Education. Scientific Learning: Research Briefing. 15(6). 2011.	QED	Mid	WP	MA	School-based
Ashtabula School District. (2010). 54% of students at Ashtabula Area City Schools improved OAT levels. Scientific Learning: Educator Briefings. July, 2010.	IGS	Short	WP	OH	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Cleveland Heights-University Heights City School District. (2010). Improved Reading Achievement by Students in the Cleveland Heights – University Heights City School District who used Fast ForWord® Products: 2009-2010. Scientific Learning: Research Reports. 14(5): 1-8. 2010.	QED	Mid	WP	OH	School-based
Everett Public Schools. (2010). Improved Reading Achievement by Students in the Everett Public Schools who used Fast ForWord® Products: 2006-2009. Scientific Learning: Research Reports. 14(2): 1-6. 2010.	IGS	Long	WP	MA	School-based
Hamburg Area School District. (2010). Improved Reading Skills by Students in the Hamburg Area School District who used Fast ForWord® Products: 2009-2010. Scientific Learning: Research Reports. 14(4): 1-6. 2010.	IGS	Long	WP	PA	School-based
Lawrence Public Schools. (2010). Longitudinal study shows benefits as Fast ForWord participants continue to make gains. Scientific Learning: Educator's Briefing. March, 2009.	QED	Long	WP	MA	School-based
Marion County Schools. (2010). Improved Reading Skills by Marion County Students who used Reading Assistant in an Intensive Summer Program. Scientific Learning: Research Reports. 14(1): 1-4. 2010.	IGS	Mid	WP	WV	School-based
Rogowsky, B. (2010). The Impact of Fast ForWord® on Sixth Grade Students' Use of Standard Edited American English. Doctor of Education dissertation, Wilkes University.	RCT	Short	Dissertation	PA	University
Rogowsky, Cooper, & Boyle. (2010). Improved Academic Achievement by Middle School Students in the Danville Area School District who used Fast ForWord® Products: 2006-2009. Scientific Learning: Research Reports. 14(8): 1-8. 2010.	IGS	Long	WP	PA	School-based
Russo, N., Hornickel, J., Nicol, T. Zeckler, S. Kraus, N. (2010) Biological changes in auditory function following training in children with autism spectrum disorders. Behavioral and Brain Functions 2010, 6:60.	QED	Short	MPRJ	n/a	University
Scientific Learning Corporation. (2010). Oral reading fluency nearly doubles; Reading skills improve 1 year 2 month. Scientific Learning: Educator's Briefings. April, 2010.	IGS	Mid	WP	NY	SLC

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Scientific Learning Corporation. (2010). Reading Progress Indicator predicts success on Arizona's Instrument to Measure Standards test. Scientific Learning: Research Briefing. 14(14). 2010.	IGS	n/a	WP	AZ	SLC
Scientific Learning Corporation. (2010). Reading Progress Indicator predicts success on the Ohio Achievement Test. Scientific Learning: Educator Briefings. June 2009.	IGS	n/a	WP	OH	SLC
Scientific Learning Corporation. (2010). Nevada Department of Education: Fast ForWord is a "High-Gain Program". Scientific Learning: Educator Briefings. July, 2010.	Literature Review	n/a	WP	NV	Independent
Scientific Learning Corporation. (2010). Reading Progress Indicator predicts success on the NWEA Measures of Academic Progress test. Scientific Learning: Educator Briefings. December, 2009.	IGS	n/a	WP	n/a	SLC
Scientific Learning Corporation. (2010). Reading Progress Indicator predicts success on Indiana's ISTEP English/Language Arts and Math Tests. Scientific Learning: Research Briefings. 14(8). 2010.	IGS	n/a	WP	IA	SLC
Scientific Learning Corporation. (2010). Reading Progress Indicator predicts success on the Ohio Achievement Assessments Reading Test. Scientific Learning: Research Briefings. 14(9). 2010.	IGS	n/a	WP	OH	SLC
Scientific Learning Corporation. (2010). Reading Progress Indicator correlates positively with the PSSA. Scientific Learning: Research Briefings. 14(10). 2010.	IGS	n/a	WP	PA	SLC
Scientific Learning Corporation. (2010). Students in School District 41, Burnaby, increased reading skills by 1 year and 4 months. Scientific Learning: Educator Briefings. April, 2010.	IGS	Short	WP	BC	SLC
Scientific Learning Corporation. (2010). The California Standards Test. Scientific Learning: White Papers. 14(3): 1-15. 2010.	White Paper	n/a	WP	CA	SLC
South Western School District. (2010). Number of students reaching advanced reading achievement level more than doubles among Fast ForWord participants at South Western. Scientific Learning: Research Briefings. 14(12). 2010.	IGS	Long	WP	PA	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
South Western School District. (2010). Students in the South Western School District increased reading skills by 1 year and 4 month. Scientific Learning: Educator Briefings. February, 2010.	IGS	Short	WP	PA	School-based
St. Mary Parish. (2010). Gifted students in Louisiana improve reading skills and LEAP scores. Scientific Learning: Educator Briefings. June, 2010.	IGS	Mid	WP	LA	School-based
St. Mary Parish. (2010). Improved Longitudinal Achievement in English/Language Arts, Math, Science, and Social Studies by Students in St. Mary Parish who used Fast ForWord® Products, Scientific Learning: Research Reports. 14(13): 1-8. 2010.	IGS	Long	WP	LA	School-based
St. Mary Parish. (2010). Percent of 4th graders at Basic or above on LEAP ELA increases from 53% to 78%. Scientific Learning: Research Reports. 14(7). 2010.	IGS	Long	WP	LA	School-based
Strong, G. K., Torgerson, C. J., Torgerson, D., & Hulme, C. (2010). A systematic meta-analytic review of evidence for the effectiveness of the 'Fast ForWord' language intervention program. The Journal of Child Psychology and Psychiatry.	Literature Review	n/a	MPRJ	n/a	Independent
Wayne County Public Schools. (2010). Students jump from 21 st to 30 th percentile in reading after summer school with Reading Assistant. Scientific Learning: Research Briefings. 14(10). 2010.	IGS	Short	WP	NC	School-based
West Jefferson Hills School District. (2010). 84% of West Jefferson Hills students increase reading proficiency level after Fast ForWord and Reading Assistant participation. Scientific Learning: Educator Briefings. August, 2010.	IGS	Long	WP	PA	School-based
Bridges Academy. Scientific Learning Corporation. (2009). Improved Reading Skills by Students at Bridges Academy who used Fast ForWord and Reading Assistant Products, Scientific Learning: Research Reports, 13 (6): 1-5. 2009.	IGS	Mid	WP	FL	School-based
Christian County Public Schools. (2009). Improved Reading Skills by Students in Christian County Public Schools who used Fast ForWord Products, MAPS for Learning: Educator Reports, 13(2): 1-10. 2009.	IGS	Mid	WP	KY	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Clarke County School District. (2009). Improved Reading Achievement by Students in the Clarke County School District who used Fast ForWord Products: 2006 - 2008, MAPS for Learning: Educator Reports, 13(1): 1-10. 2009.	QED	Mid	WP	GA	School-based
Dallas Independent School District. (2009). Improvements in Reading Achievement by Students in the Dallas Independent School District who used Fast ForWord Products and/or Reading Assistant Products: 2007 - 2008, Scientific Learning: Research Reports, 13(8): 1-8. 2009.	IGS	Long	WP	TX	School-based
Danville Area School District. (2009). Students in the Danville Area School District increased reading skills by 1 year and 4 months, MAPS for Learning: Educator Briefings. December, 2009.	IGS	Mid	WP	PA	School-based
Davenport Community Schools. (2009). Preschoolers in Davenport, IA, improve language skills from 36th to 59th percentile, MAPS for Learning: Educator Briefings. February 2009.	RCT	Long	WP	IA	School-based
Davenport Community Schools. (2009). Improved Reading Skills by Students in the Davenport Community Schools who used Fast ForWord Products, MAPS for Learning: Educator Reports, 13(4): 1-9. 2009.	IGS	Long	WP	IA	School-based
Deer Valley Unified School District. (2009). Improved English Language Skills by Students in the Deer Valley Unified School District who used Fast ForWord Products: 2008- 2009, Scientific Learning: Research Reports, 13(12): 1-5. 2009.	IGS	Short	WP	AZ	School-based
Jefferson-Morgan School District. (2009). Students in the Jefferson-Morgan School District increased reading skills by 1 year and 1 month, MAPS for Learning: Educator Briefings. April 2009.	IGS	Mid	WP	PA	School-based
Kingman Unified School District. (2009). Improved Early Reading Skills by Students in the Kingman Unified School District who used Fast ForWord Products, Scientific Learning: Educator Reports, 13(5): 1-7. 2009.	IGS	Long	WP	AZ	School-based
Raymore Peculiar School District. (2009). Improved Reading Skills by Students in the Raymore Peculiar School District who used Fast ForWord Products, Scientific Learning: Research Reports, 13(9): 1-5. 2009.	IGS	Mid	WP	MO	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
School District #36. (2009). Students in School District #36 increased reading skills by 1 year and 3 months, MAPS for Learning: Educator Briefings. June 2009.	IGS	Mid	WP	British Columbia	School-based
Scientific Learning Corporation. (2009). Improved Reading Achievement by Students in Thailand who used Fast ForWord® Products: 2007 - 2008, MAPS for Learning: Research Reports, 13(10): 1-7. 2009.	IGS	Short	WP	Thailand	SLC
Scientific Learning Corporation. (2009). Reading Progress Indicator correlates positively with Scholastic Reading Inventory Lexile scores, MAPS for Learning: Educator Briefings. January 2009.	IGS	n/a	WP	n/a	SLC
Scientific Learning Corporation. (2009). Reading Verification Improvements in Scientific Learning Reading Assistant Expanded Edition, Scientific Learning: Research Reports, 13(13): 1-18. 2009.	QED	Short	WP	n/a	SLC
Scientific Learning Corporation. (2009). The Science behind Scientific Learning's Product Placement Recommendations. Scientific Learning: Research Reports, 13(15): 1-10. 2009.	IGS	n/a	WP	n/a	SLC
Scientific Learning Corporation. (2009). Strong Reading Assistant Implementation Fidelity Leads to Better Reading Results, MAPS for Learning: Educator Briefings. February 2009.	IGS	Mid	WP	FL	SLC
St. Bernard-Elmwood Place City Schools. (2009). Students in the St. Bernard-Elmwood Place City Schools increased early reading skills from the 19th percentile to the 45 th percentile, MAPS for Learning: Educator Briefings. February 2009.	IGS	Mid	WP	OH	School-based
Sutherland, M. (2009). Improved Reading Achievement by Students in the Spotsylvania County Schools who used Fast ForWord Products, Scientific Learning: Research Reports, 13(11): 1-7. 2009.	QED	Mid	WP	VA	School-based
Westfield Washington Schools. (2009). Scientific Learning Corporation. (2009). Improved Academic Skills by Students in Westfield Washington Schools who used Fast ForWord® Products, Scientific Learning: Research Reports 13(7): 1-6. 2009.	IGS	Mid	WP	IN	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Albany County School District. (2008). Improved Language Skills by Students in the Albany County School District who used Fast ForWord Products 2006-2007. MAPS for Learning: Educator Reports, 12(5): 1-5. 2008.	IGS	Mid	WP	WY	School-based
BerCon Ltd. (2008). Improved Language Skills by Students in the Bermuda who used Fast ForWord Products through BerCon Ltd. MAPS for Learning: Educator Reports, 12(6): 1-5. 2008.	IGS	Long	WP	Ber-muda	School-based
Bedford Area School District. (2008). Students in Bedford, PA, improved reading skills an average of 9 months in less than 6 months of product use. MAPS for Learning: Educator Briefings. November, 2008.	IGS	Mid	WP	PA	School-based
Bulloch County School District. (2008). Improved Reading Achievement by Students in the Bulloch County School District who used Fast ForWord Products, MAPS for Learning; Educator Reports, 13(3): 1-7. 2008.	IGS	Short	WP	GA	School-based
Dallas Independent School District. (2008). Decreasing the Achievement Gap: Improved Reading Skills by Struggling Readers in the Dallas Independent School District who used Fast ForWord Products: A Four Year Longitudinal Study. MAPS for Learning: Educator Reports, 12(1): 1-9. 2008.	IGS	Long	WP	TX	School-based
Everett Public Schools. (2008). Improved Academic Achievement and Reading Skills by Students in the Everett Public Schools who used Fast ForWord Products: 2007 – 2008. MAPS for Learning: Educator Reports; 12(18): 1-8. 2008.	IGS	Mid	WP	MA	School-based
Everman Independent School District. (2008). Students in Everman, TX, improved reading skills an average of 1 year 3 month in 3 months of product use. MAPS for Learning: Educator Briefings. November, 2008.	IGS	Short	WP	TX	School-based
Explore Charter School. (2008). Students in Brooklyn, NY, improved reading skills an average of 1 year 1 month in 5 months of product use. MAPS for Learning: Educator Briefings. November, 2008.	IGS	Mid	WP	NY	School-based
Fort Wayne Community Schools. (2008). Improved Reading Skills in students in the Fort Wayne Community Schools who used Fast ForWord Products. MAPS for Learning: Educator Reports, 12(10): 1-7. 2008.	IGS	Mid	WP	IN	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Gillam, R. B., Frome Loeb, D., Hoffman, L. M., Bohman, T., Gamplin, C. A., Thibodeau, L., Widen, J., Brandel, J., & Friel-Patti, S. (2008). The efficacy of Fast ForWord Language intervention in school-age children with language impairment: A randomized controlled trial. <i>Journal of Speech, Language, and Hearing Research</i> , 51, 97-119.	RCT	Long	MPRJ	n/a	Independent
Hamden Public Schools. (2008). Improved Reading Skills by Students in the Hamden Public Schools who used Fast ForWord Products. <i>MAPS for Learning: Educator Reports</i> , 12(12): 1-5. 2008.	IGS	Short	WP	CT	School-based
Hamden Public Schools. (2008). Improved Reading Achievement by Students in the Hamden Public Schools who used Fast ForWord Products: A Longitudinal Study. <i>MAPS for Learning: Educator Reports</i> , 12(13): 1-7. 2008.	IGS	Long	WP	CT	School-based
Hays Consolidated Independent School District. (2008). Students in Kyle, TX, improved reading skills an average of 1 year 1 month in less than 4 months of product use. <i>MAPS for Learning: Educator Briefings</i> . November, 2008.	IGS	Short	WP	TX	School-based
Kentwood Public Schools. (2008). Improved Reading Skills by Students in the Kentwood Public Schools who used Fast ForWord Products 2007-2008. <i>MAPS for Learning: Educator Reports</i> , 12(14): 1-7. 2008.	IGS	Short	WP	MI	School-based
Krumpe J., Harlow S. (2008). Effects of a Computer-Assisted Language Intervention in a Rural Nevada Center. <i>Perceptual Motor Skills</i> : 2008, 106, 679-689.	QED	Short	MPRJ	NV	University
Lafourche Parish Public Schools. (2008). (2008). A Pilot Study Shwoing Improved Achievement by Students in the Lafourche Parish Public Schools who were Struggling to Pass the High School Exit Exam. <i>MAPS for Learning: Educator Reports</i> , 12(26): 1-4.	IGS	Short	WP	LA	School-based
Lamar County School District. (2008). Students in Purvis, MS, improved reading skills an average of 1 year in 4 months of product use. <i>MAPS for Learning: Educator Briefings</i> . November, 2008.	IGS	Short	WP	MS	School-based
Lamar County School District. (2008). Students in Purvis, MS, improved reading skills an average of 1 year 5 months in 4 months of product use. <i>MAPS for Learning: Educator Briefings</i> . November, 2008.	IGS	Short	WP	MS	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Laurel Highlands School District. (2008). Students in Uniontown, PA, improved reading skills an average of 1 year in 2 months of product use. MAPS for Learning: Educator Briefings. November, 2008.	IGS	Short	WP	PA	School-based
Lawrence Public Schools. (2008). Improved Reading Skills by Students in Lawrence Public Schools who used Fast ForWord Products. MAPS for Learning: Educator Reports, 12(11): 1-8. 2008.	QED	Mid	WP	MA	School-based
Marshall Independent School District. (2008). Improved Reading Skills by Students in the Marshall Independent School District who used Fast ForWord Products 2007-2008. MAPS for Learning: Educator Reports, 12(20): 1-8. 2008.	IGS	Mid	WP	TX	School-based
Miami Unified School District. (2008). Improved Reading Skills by Students at Lee Kornegay Junior High School who used Fast Forward Products. MAPS for Learning: Educator Reports, 12(4): 1-5. 2008.	IGS	Mid	WP	AZ	School-based
Milford Public Schools. (2008). Improved Reading Achievement by Students in the Milford Public Schools who used Fast ForWord Products: 2007 – 2008. MAPS for Learning: Educator Reports, 12(19): 1-6. 2008.	IGS	Mid	WP	CT	School-based
Perrysburg Exempted Village Schools. (2008). Improved Reading Skills by Students in the Perrysburg Exempted Village Schools who used Fast ForWord Products. MAPS for Learning: Educator Reports, 12(2): 1-6. 2008.	IGS	Mid	WP	OH	School-based
Redondo Beach Unified School District. (2008). Improved Achievement by Students in the Redondo Beach Unified School District Who Use Fast ForWord Products. MAPS for Learning: Educator Reports, 12(24): 1-7. 2008.	IGS	Mid	WP	CA	School-based
Rogers School District. (2008). Improved Reading Skills by Students who used the Fast ForWord Literacy and the Fast ForWord Literacy Advanced Products. MAPS for Learning: Educator Reports, 12(8): 1-7. 2008.	QED	Short	WP	AR	School-based
Roy, D. (2008). A Study Conducted in India to Assess the Validity of Fast ForWord Language Gateway Edition. Psychology Research Unit, India Statistical Institute. MAPS for Learning: Research Reports, 12(1): 1-63.	IGS	Mid	WP	India	University

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Sampson County Schools. (2008). Improved Reading Skills by Students in Sampson County Schools who used Fast ForWord Products. MAPS for Learning: Educator Reports, 12(3): 1-5. 2008.	IGS	Mid	WP	NC	School-based
Sampson County Schools. (2008). Improved Academic Achievement and Reading Skills by Students in Sampson County Schools who used Fast ForWord Products: 2007 – 2008. MAPS for Learning: Educator Reports, 12(21): 1-7. 2008.	IGS	Short	WP	NC	School-based
Scientific Learning Corporation. (2008). Improved Early Reading Skills by Students in the Philippines who used Fast ForWord Products. MAPS for Learning: Educator Reports, 12(23): 1-8. 2008.	IGS	Short	WP	Philippines	SLC
Scientific Learning Corporation. (2008). Improved Reading Skills by Students who used the Fast ForWord Literacy Product for Three Days a Week. MAPS for Learning: Educator Reports, 12(17): 1-6. 2008.	QED	Short	WP	MI	SLC
Scientific Learning Corporation. (2008). Computer-based tutor performs like an experienced teacher in detecting reading errors. MAPS for Learning: Educator Briefings. March, 2008.	Literature Review	N/A	WP	MA	SLC
Scientific Learning Corporation. (2008). Adding ten minutes of reading time dramatically change levels of print exposure. MAPS for Learning: Educator Briefings. March, 2008.	Literature Review	Short	WP	n/a	SLC
Scientific Learning Corporation. (2008). Students show reading fluency gains after guided oral reading practice with Reading Assistant. MAPS for Learning: Educator Briefings. March, 2008.	QED	Short	WP	MA	SLC
Scientific Learning Corporation. (2008). Fast ForWord Language v2 improves reading skills with significantly greater speed, efficiency, and intensity than Fast ForWord Language. MAPS for Learning: Educator Briefings. November, 2008.	QED	Short	WP	N/A	SLC
Smethport Area School District. (2008). Improved Early Reading Skills by Students in the Smethport Area School District who used Fast ForWord Products, MAPS for Learning: Educator Reports, 12(25): 1-4. 2008.	IGS	Short	WP	PA	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Springfield Public Schools. (2008). Improved Reading Skills by Students in the Springfield Public Schools who used Fast ForWord Products. MAPS for Learning: Educator Reports, 12(7): 1-6. 2008.	IGS	Short	WP	MA	School-based
St. Mary Parish Public School System. (2008). Improved Reading Achievement by Students in the St. Mary Parish Public School System who used Fast ForWord Products: the 2006 – 2007 and 2007 – 2008 School Years. MAPS for Learning: Educator Reports, 12(9): 1-10. 2008.	IGS	Mid	WP	LA	School-based
St. Mary Parish Public School System. (2008). Improved Reading Achievement by Students in the St. Mary Parish Public School System who used Fast ForWord Products: 2007 – 2008 School Year. MAPS for Learning: Educator Reports, 12(22): 1-8. 2008.	IGS	Long	WP	LA	School-based
St. Mary's Orphanage and Day School. (2008). Improved Auditory Discrimination and Early Reading Skills Accelerate English Language Development in Students in Kolkata, India who used Fast ForWord Products. MAPS for Learning: Educator Reports, 12(16): 1-5. 2008.	IGS	Short	WP	India	School-based
Stevens C., Fanning J., Coch D., Sanders L., Neville H. (2008). Neural mechanisms of selective auditory attention are enhanced by computerized training: Electrophysiological evidence from language-impaired and typically developing children. Brain Research: Volume 1205, 18 April 2008, p 55-69.	QED	Short	MPRJ	OR	University
Syracuse City School District. (2008). Students in Syracuse, NY, improved reading skills an average of 1 year 1 month in 2 months of product use. MAPS for Learning: Educator Briefings. November, 2008.	IGS	Short	WP	NY	School-based
Waterford Public Schools. (2008). Improved Reading Achievement by Students in the Waterford Public Schools who used Fast ForWord Products: 2006 – 2008. MAPS for Learning: Educator Reports, 12(15): 1-6. 2008.	IGS	Long	WP	CT	School-based
Boone County School District (2007). Improved Early Reading Skills by Students in Boone County School District who used Fast ForWord Language – A Comparison of 30- and 50-Minute Protocols. MAPS for Learning: Educator Reports, 11(18): 1-6. 2007.	QED	Short	WP	KY	SLC
Boone County School District (2007). Boone County School District Makes Gains in Academic Skills. MAPS for Learning: Educator Briefings. 2007.	IGS	Mid	WP	KY	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Boone County School District and El Campo Independent School District (2007). Improved Reading Fluency Skills by Students who used the Fast ForWord Language to Reading Product. MAPS for Learning: Educator Reports, 11(19): 1-5. 2007.	QED	Short	WP	KY	SLC
California School District (2007). Nearly One Year of Reading Gain after Nine Weeks on Fast ForWord to Reading 3 for 30 Minutes per Day. MAPS for Learning: Educator's Briefing. July 2007.	IGS	Mid	WP	CA	SLC
Cattaraugus-Allegany-Erie-Wyoming BOCES (2007). Improved Reading Skills by Students in the Cattaraugus-Allegany-Erie-Wyoming BOCES who used Fast ForWord Products 2006-2007. MAPS for Learning: Educator Reports, 11(25): 1-6. 2007.	IGS	Mid	WP	WY	School-based
Edgewood Independent School District (2007). Students in the Edgewood Independent School District Show Gains on the TPRI and Tejas LEE after using Fast ForWord Products. MAPS for Learning: Educator Reports, 11(17): 1-6. 2007.	IGS	Mid	WP	TX	School-based
Eldred Central School District (2007). Improved Reading Skills by Students in the Eldred Central School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(1): 1-5. 2007.	IGS	Short	WP	NY	School-based
Everett Public Schools (2007). Improved Reading Skills by Students in the Everett Public Schools who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(33): 1-9. 2007.	IGS	Mid	WP	MA	School-based
Gaab N., Gabrieli J. D. E, Deutsch G. K., Tallal P., Temple E. (2007). Neural correlates of rapid auditory processing are disrupted in children with developmental dyslexia and ameliorated with training: An fMRI study. Restorative Neurology and Neuroscience: 25: 295-310. 2007.	QED	Short	MPRJ	N/A	Independent
Highland View Elementary, Bristol, VA (2007). Improved Reading Skills by Students who used Fast ForWord Products in Highland View Elementary, Bristol, VA. MAPS for Learning: Educator Reports, 11(14): 1-4. 2007.	IGS	Mid	WP	VA	School-based
Houston County Schools (2007). Improved Language and Early Reading Skills by Students in the Houston County Schools who used Fast ForWord Products 2006-2007. MAPS for Learning: Educator Reports, 11(30): 1-7. 2007.	IGS	Short	WP	TX	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Ireland (2007). Improved Reading Skills by Students in Ireland who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(4): 1-6. 2007.	IGS	Short	WP	Ireland	School-based
Kentwood Public Schools (2007). Improved Reading Skills by Students in the Kentwood Public Schools who used Fast ForWord Products 2006-2007. MAPS for Learning: Educator Reports, 11(26): 1-6. 2007.	IGS	Mid	WP	MI	School-based
Lafourche Parish Public Schools (2007). Improved Reading Achievement by Students in the Lafourche Parish Public Schools who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(23): 1-5. 2007.	IGS	Long	WP	LA	School-based
Lakshminarayanan K.. Tallal P. (2007). Generalization of non-linguistic auditory perceptual training to syllable discrimination. Restorative Neurology and Neuroscience 25 (2007) 263–272. IOS Press.	RCT	Short	MPRJ	N/A	University
Lancaster County School District (2007). Improved Early Reading Skills by Students in Lancaster County School District who used Fast ForWord to Reading 1. MAPS for Learning: Educator Reports, 11(5): 1-5. 2007.	QED	Short	WP	SC	SLC
Liberty Public School District (2007). Improved Reading and Language Skills by Students in the Liberty Public School District who used Fast ForWord. MAPS for Learning: Educator Reports, 11(27): 1-7. 2007.	IGS	Mid	WP	MO	School-based
Mexico Public Schools #59 (2007). Improved Reading Skills by Students in Mexico Public Schools #59 who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(31): 1-4. 2007.	IGS	Mid	WP	MO	School-based
Niagara Falls City School District (2007). Improved Reading Skills by Students in the Niagara Falls City School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(24): 1-10. 2007.	QED	Mid	WP	NY	School-based
North Carolina and Tennessee School Districts (2007). Improved Reading Skills and Academic Achievement by Gifted and Talented Students who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(11): 1-4. 2007.	IGS	Short	WP	NC, TN	SLC

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Pawhuska School District (2007). Improved Reading Skills by Students in Pawhuska School District who used Fast ForWord to Reading 2. MAPS for Learning: Educator Reports, 11(20): 1-5. 2007.	QED	Short	WP	OK	SLC
PPEP TEC High School (2007). Improved Reading Skills by Students in the PPEP TEC High School who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(16): 1-7. 2007.	IGS	Short	WP	AZ	School-based
Rogowsky B. A. (2007). Does Fast ForWord Provide Implicit Grammar Instruction?. MAPS for Learning: Research Reports, 11(1): 1-7. 2007.	Literature Review	N/A	Dissertation	N/A	University
Scientific Learning Corporation (2007). Improved Language Skills by Students with Developmental Delays who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(12): 1-5. 2007.	IGS	Short	WP	N/A	SLC
Scientific Learning Corporation (2007). Improved Reading Skills by Students who used the Fast ForWord to Reading 4 and 5 Products. MAPS for Learning: Educator Reports, 11(21): 1-7. 2007.	QED	Short	WP	FL	SLC
Smokey Hill Education Service Center (2007). Improved Reading Skills by Students in the Smoky Hill Education Service Center who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(10): 1-6. 2007.	IGS	Long	WP	KS	School-based
Sonic Hearing (2007). Improved Language and Reading Skills by Students in NSW Australia who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(3): 1-5. 2006.	IGS	Short	WP	Australia	Independent
South Euclid - Lyndhurst School District (2007). Improved Reading Skills by Students in the South Euclid - Lyndhurst School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(28): 1-5. 2007.	QED	Mid	WP	OH	School-based
South Madison Community School Corporation (2007). Improved Reading Skills by Students in the South Madison Community School Corporation who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(34): 1-7. 2007.	QED	Mid	WP	IN	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
St. Mary Parish, Louisiana (2007). Improved Reading Skills by Students in the St. Mary Parish Public School System who used Fast ForWord Products. MAPS for Learning Education: Educator Reports, 11(9): 1-5. 2007.	IGS	Short	WP	LA	School-based
Tumwater School District (2007). Improved Reading Skills by Students in the Tumwater School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(22): 1-7. 2007.	IGS	Long	WP	WA	School-based
Vanguard School of Lake Wales (2007). Improved Reading Skills by Students in the Vanguard School of Lake Wales who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(15): 1-5. 2007.	IGS	Mid	WP	FL	School-based
Virginia Department of Correctional Education (2007). Improved Reading Skills by Students in the Virginia Department of Correctional Education who used Fast ForWord Products 2005-2006 Report. MAPS for Learning: Educator Reports, 11(3): 1-6. 2007.	IGS	Short	WP	VA	School-based
Washington Local School District (2007). Improved Reading Skills by Students in the Washington Local School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(8): 1-8. 2007.	IGS	Long	WP	OH	School-based
Washington Local School District (2007). Improved Reading Skills by Students in Washington Local Schools who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(32): 1-6. 2007.	RCT	Short	WP	OH	School-based
William Penn School District (2007). Improved Language and Early Reading Skills by Students in the William Penn School District who used Fast ForWord Language. MAPS for Learning: Educator Reports, 11(13): 1-4. 2007.	IGS	Short	WP	PA	School-based
Worcester County Public School District (2007). Improved Reading Skills by Students in Worcester County Public School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(7): 1-8. 2007.	IGS	Short	WP	MD	School-based
Warren County Schools (2007). Improved Reading Skills by Students in Warren County Schools who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(29): 1-4. 2007.	IGS	Short	WP	NC	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Adams, M.J. (2006). The promise of automatic speech recognition for fostering literacy growth in children and adults. In M.C. McKenna, L.D. Labbo, R.D. Kieffer, & D. Reinking (Eds.), <i>International Handbook of Literacy and Technology, Volume 2</i> . Mahwah, NJ: Lawrence Erlbaum Associates.	QED	Short	WP	MA	SLC
Albany County School District (2006). Improved Language Skills by Students in the Albany County School District who used Fast ForWord Products. <i>MAPS for Learning: Educator Reports, 10(22)</i> : 1-5. 2006.	IGS	Short	WP	WY	School-based
Amarillo Independent School District (2006). Improved Reading Skills by High School Students in the Amarillo Independent School District who used Fast ForWord Products. <i>MAPS for Learning: Educator Reports, 10(34)</i> : 1-5. 2006.	IGS	Short	WP	TX	School-based
Boone County School District (2006). Improved Reading Skills by Students in Boone County School District who used Fast ForWord Products. <i>MAPS for Learning: Educator Reports, 10(15)</i> : 1-7. 2006.	QED	Short	WP	KY	School-based
Borman G., Benson J. (2006). Can Brain Research and Computers Improve Literacy? A Randomized Field Trial of the Fast ForWord Language Computer-Based Training Program. http://wcer-web.ad.education.wisc.edu/docs/working-papers/Working_Paper_No_2006_05.pdf	RCT	Short	WP	N/A	Independent
Bridges Academy (2006). Improved Reading Skills by Students in Bridges Academy who used Fast ForWord Products. <i>MAPS for Learning: Educator Reports, 10(14)</i> : 1-7. 2006.	IGS	Short	WP	FL	School-based
Cattaraugus-Allegany-Erie-Wyoming BOCES (2006). Improved Reading Skills by Students in the Cattaraugus-Allegany-Erie-Wyoming BOCES who used Fast ForWord Products. <i>MAPS for Learning: Educator Reports, 10(26)</i> 1-5. 2006.	IGS	Short	WP	NY	School-based
Dallas Independent School District (2006). Improved Reading Skills by Students in the Dallas Independent School District who used Fast ForWord Products. <i>MAPS for Learning: Educator Reports, 11(2)</i> : 1-8. 2006.	IGS	Short	WP	TX	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Dallas Independent School District (2006). Significant Gains in Reading for Second Language Learners and Special Education Students using Fast ForWord Software: Dallas Independent School District. MAPS for Learning: Educator Reports, 10(9): 1-7. 2006.	IGS	Short	WP	TX	School-based
Eustace Independent School District (2006). Improved Reading Achievement by Students in the Eustace Independent School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(30): 1-5. 2006.	IGS	Short	WP	TX	School-based
Franklin Regional School District (2006). Improved Reading Skills by Students in the Franklin Regional School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(29) : 1-5. 2006.	IGS	Short	WP	PA	School-based
Friel-Patti S., DesBarres K., Thibodeau L. (2006). Case studies of children using Fast ForWord. American Journal of Speech-Language Pathology, 10:203-215 2001.	IGS	Short	MPRJ	N/A	Independent
Fulton County Schools (2006). Improved Reading Skills by Students in Fulton County Schools who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(18) : 1-5. 2006.	IGS	Short	WP	KY	School-based
Hamilton County School District (2006). Improved Academic Achievement by Students in the Hamilton County School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(1): 1-4. 2006.	IGS	Short	WP	TN	School-based
Hicksville Exempted Village School District (2006). Improved Reading Skills by Students in the Hicksville Exempted Village School District who used Fast ForWord Products. MAPS for Learning, Educator Reports, 10(23): 1-6. 2006.	RCT	Short	WP	OH	SLC
Ho C. (2006). Improved Reading Skills and Behavior in Primary School Students who Used Fast ForWord Language at a Singapore Public School. MAPS for Learning: Educator Reports, 10(5): 1-6. 2006.	IGS	Short	WP	Singapore	Independent
Innovative Therapies (2006). Improved Auditory Processing by Students in the United Kingdom who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(11): 1-6. 2006.	IGS	Short	WP	United Kingdom	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Kentwood Public Schools (2006). Improved Reading Skills by Students in the Kentwood Public Schools who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(27): 1-6. 2006.	IGS	Short	WP	MI	School-based
Lafayette Parish School System (2006). Improved Reading Skills by Students in the Lafayette Parish School System who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(35): 1-8. 2006.	IGS	Short	WP	LA	School-based
Lamar County School District (2006). Improved Language and Reading Achievement by Students in the Lamar County School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 11(6): 1-5. 2006.	IGS	Long	WP	MS	School-based
Lifelong Learning (2006). Improved English Language and Perceptual Skills by German Secondary School Students who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(4): 1-6. 2006.	RCT	Short	WP	Germany	School-based
Manchester City School District (2006). Improved Early Reading Skills by Students in Manchester City School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(6): 1-6. 2006.	QED	Short	WP	TN	School-based
Maryland School District (2006). Improved Reading Skills by Students who used Fast ForWord to Reading Prep. MAPS for Learning: Product Reports, 10(1): 1-6. 2006.	RCT	Mid	WP	MD	SLC
Nalanda Institute (2006). Improved Cognitive Skills Accelerate English Language and Reading Development in Bilingual English Speaking Students in India who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(17): 1-6. 2006.	IGS	Short	WP	India	School-based
Oakland Unified School District (2006). Improved Reading Skills by Students in the Oakland Unified School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(2): 1-4. 2006.	IGS	Short	WP	CA	School-based
Pocatello/Chubbuck School District #25 (2006). Improved Reading Skills by Students in Pocatello/Chubbuck School District #25 who used Fast ForWord Products. MAPS for Learning, Educator Reports, 10(25): 1-5. 2006.	QED	Short	WP	ID	SLC

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Pocatello/Chubbuck School District 25 (2006). Improved Reading Achievement by Students in the Pocatello/Chubbuck School District 25 who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(33): 1-7. 2006.	IGS	Short	WP	ID	School-based
Redlands Unified School District (2006). Improved Academic Achievement by Students in the Redlands Unified School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(19): 1-6. 2006.	IGS	Long	WP	CA	School-based
School District 16 (2006). Improved Language Skills by Students in School District 16 who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(32): 1-6. 2006.	QED	Mid	WP	NB	School-based
Shelby County School District (2006). Improved Reading Skills by Students in the Shelby County School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(16): 1-5. 2006.	IGS	Short	WP	AL	School-based
Sonic Hearing (2006). Improved Language and Literacy Skills in Students who Used Fast ForWord Products at Public Primary Schools in Western Australia. MAPS for Learning: Educator Reports, 10(36): 1-7. 2006.	RCT	Short	WP	Australia	Independent
Trumbull Public School District (2006). Improved Reading Skills by Students in the Trumbull Public School District who used Fast ForWord Products. MAPS for Learning, Educator Reports 2006.	IGS	Short	WP	CT	School-based
Union City Area School District (2006). Improved Reading Skills by Students in the Union City Area School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(31): 1-4. 2006.	IGS	Short	WP	PA	School-based
Van Independent School District (2006). Improved Reading Skills by Students in the Van Independent School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(28): 1-5. 2006.	IGS	Short	WP	TX	School-based
Virginia Department of Correctional Education (2006). Improved Reading Skills by Students in the Virginia Department of Correctional Education who used Fast ForWord Products 2004-2005 Report. MAPS for Learning: Educator Reports, 10(13): 1-5. 2006.	IGS	Short	WP	VA	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Burlington Area School District (2005). Improved Reading Achievement by Students in the Burlington Area School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(12): 1-7. 2005.	IGS	Short	WP	WI	School-based
Christina School District (2005). Improved Academic Achievement by Students in Christina School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(7): 1-10. 2005.	IGS	Long	WP	DE	School-based
Clover Park School District 400 (2005). Improved Language and Reading Skills by Students in Clover Park School District 400 who used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(6): 1-7. 2005.	IGS	Short	WP	WA	School-based
Cohen W., Hodson A., O'Hare A., Boyle J., Durrani T., McCartney E., Matthey M., Naftalin L., Watson J. (2005). Effects of Computer-Based Intervention Through Acoustically Modified Speech (Fast ForWord) in Severe Mixed Receptive—Expressive Language Impairment: Outcomes From a Randomized Controlled Trial. Journal of Speech, Language, and Hearing Research 48: 715-729. 2005.	RCT	Short	MPRJ	N/A	Independent
Columbia School District (2005). Improved Reading Skills by Students in the Columbia School District who used Fast ForWord Products. MAPS for Learning, Educator Reports, 9(36): 1-8. 2005.	IGS	Short	WP	MO	School-based
Dallas Independent School District (2005). Improved Reading Skills by Students in the Dallas Independent School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(34): 1-6. 2005.	IGS	Short	WP	TX	School-based
Dallas Independent School District (2005). Struggling readers in Dallas ISD gain 2.5 grade levels. MAPS for Learning: Educator Briefings. 2005.	IGS	Short	WP	TX	School-based
El Campo Independent School District (2005). Improved Reading Skills by Students in the El Campo Independent School District who used Fast ForWord Products with a 30-Minute Protocol. MAPS for Learning: Educator Reports, 9(35): 1-4. 2005.	IGS	Short	WP	TX	School-based
El Campo Independent School District (2005). Improved Reading Skills by Students in the El Campo Independent School District who used Fast ForWord Products. MAPS for Learning, Educator Reports, 9(29): 1-5. 2005.	IGS	Short	WP	TX	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Erlanger-Elsmere Independent School District (2005). Improved Reading Skills by Students in the Erlanger-Elsmere Independent School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(22): 1-4. 2005.	IGS	Short	WP	KY	School-based
Harlem School District 12 (2005). Improved Academic Skills by Students at Harlem School District 12 who used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(11): 1-4. 2005.	IGS	Short	WP	MT	School-based
Harlem School District 12 (2005). Improved Academic Skills in the Harlem School District 12 by Students with Native American Ancestry who used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(12): 1-4. 2005.	IGS	Short	WP	MT	School-based
Hingham Public School District (2005). Improved Reading Skills by Students in the Hingham Public School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(26): 1-4. 2005.	IGS	Short	WP	MA	School-based
Joshua Independent School District (2005). Improved Academic Achievement by Students in the Joshua Independent School District who used Fast ForWord Products. MAPS for Learning, Educator Reports, 9(19): 1-5. 2005.	IGS	Short	WP	TX	School-based
Juneau School District (2005). Improved Reading Skills by Students in the Juneau School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(10): 1-5. 2005.	IGS	Short	WP	AK	School-based
La Joya Independent School District (2005). Improved Reading Skills by Students in the La Joya Independent School District who used Fast ForWord Products. MAPS for Learning, Educator Reports, 9(32): 1-7. 2005.	IGS	Short	WP	TX	School-based
Lancaster County School District (2005). Improved Reading Skills by Students in Lancaster County School District who used Fast ForWord to Reading 2. MAPS for Learning: Educator Reports, 9(8): 1-4. 2005.	RCT	Short	WP	SC	SLC
Miami-Dade County Public Schools (2005). Improved Reading Achievement by Students in the Miami-Dade County Public Schools who used Fast ForWord Products. MAPS for Learning: Educators Reports, 9(10): 1-5. 2005.	IGS	Short	WP	FL	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Milford City School District (2005). Improved Reading Skills by Students in the Milford City School District who used Fast ForWord Products. MAPS for Learning: Educators Reports, 9(1): 1-4. 2005.	IGS	Short	WP	CT	School-based
Monessen City School District (2005). Improved Reading Skills by Students in the Monessen City School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(23): 1-6. 2005.	IGS	Short	WP	PA	School-based
Niagara Falls City School District (2005). Improved Cognitive and Language Skills by Students in the Niagara Falls City School District who used Fast ForWord Products 2004 - 2005. MAPS for Learning: Educator Reports, 9(33): 1-7. 2005.	IGS	Short	WP	NY	School-based
Ohio, Texas, and South Carolina School Districts (2005). Improved Early Reading Skills by Students in Three Districts who used Fast ForWord to Reading 1. MAPS for Learning: Product Reports, 9(1): 1-5. 2005.	RCT	Short	WP	OH, TX, SC	SLC
Oregon City School District (2005). Improved Reading Achievement by Students in Oregon City School District who used Fast ForWord Products. MAPS for Learning, Educator Reports, 9(20): 1-5. 2005.	IGS	Mid	WP	OH	School-based
Petal School District (2005). Improved Academic Achievement by Students in the Petal School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(28): 1-6. 2005.	QED	Long	WP	MS	School-based
Pocatello/Chubbuck School District 25 (2005). Improved Reading Achievement by Students in Pocatello/Chubbuck School District 25 who used Fast ForWord Products, Longitudinal Results. MAPS for Learning: Educator Reports, 9(38): 1-6. 2005.	IGS	Long	WP	ID	School-based
Pocatello/Chubbuck School District 25 (2005). Improved Reading Achievement by Students in the Pocatello/Chubbuck School District 25 who used Fast ForWord Products During 2004-2005. MAPS for Learning: Educator Reports, 9(39): 1-5. 2005.	IGS	Short	WP	ID	School-based
Portsmouth School District (2005). Improved Reading Skills by Students in the Portsmouth School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 10(8): 1-4. 2005.	IGS	Short	WP	RI	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Poteau School District (2005). Improved Reading Skills by Students in the Poteau School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(16): 1-5. 2005.	IGS	Short	WP	OK	School-based
School District of Philadelphia (2005). Improved Reading Achievement by Students in the School District of Philadelphia Who Used Fast ForWord Products During the 2004 – 2005 School Year. MAPS for Learning: Educator Reports, 9(30): 1-8. 2005.	IGS	Short	WP	PA	School-based
School District of Philadelphia (2005). Improved Reading Achievement by Students in the School District of Philadelphia Who Used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(31): 1-6. 2005.	QED	Short	WP	PA	School-based
Seminole County School District (2005). Improved Reading Skills by Students in Seminole County School District who used Fast ForWord Products. MAPS for Learning: Product Reports, 9(17): 1-6. 2005.	RCT	Short	WP	FL	School-based
Springfield City School District (2005). Improved Early Reading Skills by Students in Springfield City School District who used Fast ForWord to Reading 1. MAPS for Learning: Educator Reports, 9(25): 1-5. 2005.	RCT	Short	WP	OH	School-based
Texas School District (2005). Improved Reading Skills by Students in a Texas School District who used Fast ForWord Products. MAPS for Learning: Educators Reports, 9(24): 1-6. 2005.	IGS	Short	WP	TX	School-based
Todd County School District (2005). Improved Reading Skills by Students in Todd County School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(14): 1-8. 2005.	QED	Mid	WP	SD	School-based
United Independent School District (2005). Improved Reading Skills by Students in the United Independent School District who used Fast ForWord Products. MAPS for Learning, Educator Reports, 9(27): 1-5. 2005.	IGS	Short	WP	TX	School-based
Washington Local School District (2005). Improved Reading Achievement by Students in the Washington Local School District who used Fast ForWord Products 2004-2005. MAPS for Learning: Educator Reports, 9(37): 1-8. 2005.	IGS	Short	WP	OH	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Washington Local School District (2005). Improved Reading Achievement by Students in the Washington Local School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(9): 1-6. 2005.	IGS	Short	WP	OH	School-based
Weakley County School District (2005). Improved Reading Skills by Students in Weakley County School District who used Fast ForWord Products. MAPS for Learning, Educator Reports, 9(21): 1-6. 2005.	IGS	Short	WP	TN	School-based
Weymouth Public Schools (2005). Improved Oral Language Skills by Students in Weymouth Public Schools who used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(18): 1-5. 2005.	IGS	Short	WP	MA	School-based
Wichita Falls Independent School District (2005). Improved Reading Skills by Students in the Wichita Falls Independent School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(13): 1-4. 2005.	IGS	Short	WP	TX	School-based
Williamsport Area School District (2005). Improved Reading Skills by Students in Williamsport Area School District who used Fast ForWord Language. MAPS for Learning: Educator Reports, 9(15): 1-4. 2005.	IGS	Short	WP	PA	School-based
Albuquerque School District (2004). Improved Language and Reading Skills by Students in the Albuquerque School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(33): 1-5. 2004.	IGS	Short	WP	NM	School-based
Anne Arundel County Public Schools (2004). Improved Reading Skills by Students in the Anne Arundel County Public Schools who used Fast ForWord Products. MAPS for Learning: Educator Reports, 9(4): 1-5. 2004.	IGS	Short	WP	MD	School-based
Bay District Schools (2004). Improved Reading Achievement by Students in the Bay District Schools in Florida who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(27): 1-4. 2004.	IGS	Short	WP	FL	School-based
Berlin School District (2004). Improved Cognitive and Early Reading by Students in the Berlin School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(31): 1-5. 2004.	QED	Short	WP	WI	School-based
Boone County School District (2004). Improved Language and Reading Skills by Students in the Boone County School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(17): 1-7. 2004.	IGS	Short	WP	KY	School-Based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Brainerd School District (2004). Improved Language Skills by Students in Brainerd School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(29): 1-5. 2004.	QED	Short	WP	MN	School-based
California, Pennsylvania, and Texas School Districts (2004). Improved Language and Reading Skills by Students at Title I Schools who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(16): 1-8. 2004.	IGS	Short	WP	CA, PA, TX	School-based
Centerville Elementary School (2004). Reading Skills Improved by Students at Centerville Elementary School who used Fast ForWord to Reading 3. MAPS for Learning: Educator Reports, 8(2): 1-5. 2004.	IGS	Short	WP	PA	School-based
Cherry Hill Public School District (2004). Improved Language and Early Reading Skills by Students at Cherry Hill Public School District in New Jersey who used Fast ForWord Language. MAPS for Learning: Educator Reports, 8(4): 1-5. 2004.	QED	Short	WP	NY	School-based
Cobb County School District (2004). Improved Reading Skills by Students at the Cobb County School District in Georgia who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(5): 1-5. 2004.	QED	Short	WP	GA	School-based
Deppeler J. M., Taranto A. M., Bench J. (2004). Language and Auditory Processing Changes Following Fast ForWord. The Australian and New Zealand Journal of Audiology, 26(2): 94–109. 2004.	IGS	Short	MPRJ	Australia	Independent
George Thomas Middle School (2004). Improved Reading Achievement by Middle School Students at George Thomas Middle School who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(22): 1-3. 2004.	IGS	Mid	WP	PA	School-based
Harrisburg School District (2004). Improved Language and Early Reading Skills by Students in the Harrisburg School District who used Fast ForWord Language. MAPS for Learning: Educator Reports, 8(10): 1-5. 2004.	IGS	Short	WP	PA	School-based
Killeen Independent School District (2004). Improved Reading Achievement by Students in the Killeen Independent School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(23): 1-8. 2004.	IGS	Mid	WP	TX	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
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. Doctor of Education dissertation, East Tennessee State University. http://dc.etsu.edu/cgi/viewcontent.cgi?article=2054&context=etd	QED	Long	Dissertation	TN	Independent
Marshall County School District (2004). Improved Early Reading Skills by Students in the Marshall County School District who used Fast ForWord Basics. MAPS for Learning: Educator Reports, 8(12): 1-3. 2004.	IGS	Short	WP	KY	School-based
Mora School District (2004). Improved Language Skills by Students at Mora School District who used Fast ForWord Language. MAPS for Learning: Educator Reports, 8(19): 1-4. 2004.	RCT	Short	WP	MN	SLC but peer-reviewed*
Niagara Falls City School District (2004). Improved Cognitive and Language Skills by Students in the Niagara Falls City School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(35): 1-6. 2004.	IGS	Short	WP	NY	School-based
Pawhuska and Harlandale School Districts (2004). Improved Reading Achievement by Students in the Pawhuska and Harlandale School Districts who used Fast ForWord to Reading 3. MAPS for Learning: Educator Reports, 8(13): 1-3. 2004.	QED	Short	WP	OK	SLC
Pocatello/Chubbuck School District #25 (2004). Improved Reading Skills by Students in Pocatello/Chubbuck School District 25 who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(32): 1-3. 2004.	IGS	Short	WP	ID	School-based
Pokorni J.I., Worthington C. K., Jamison P. J. (2004). Phonological Awareness Intervention: Comparison of Fast ForWord, Earobics, and LiPS. Educational Research 97: 2004.	QED	Long	MPRJ	N/A	Independent
Pottsville School District (2004). Improved Language Skills by Students in Pottsville School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(24): 1-4. 2004.	IGS	Short	WP	AR	School-based
Puyallup School District (2004). Improved Language and Early Reading Skills by Students in the Puyallup School District who used Fast ForWord products. MAPS for Learning: Educator Reports, 8(11): 1-6. 2004.	IGS	Short	WP	WA	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Rockaway Township School District (2004). Improved Language and Early Reading Skills by Students at the Rockaway Township School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(15): 1-5. 2004.	IGS	Short	WP	NJ	School-based
Rouse C. E., Krueger A. B. (2004). Putting computerized instruction to the test: a randomized evaluation of a “scientifically based” reading program5. Economics of Education Review 23: 323–338. 2004.	RCT	Mid	MPRJ	N/A	Independent
School District 54 (2004). Improved Language and Early Reading Skills by Students at School District 54 in Schaumburg who used Fast ForWord Language. MAPS for Learning: Educator Reports, 8(6): 1-4. 2004.	IGS	Long	WP	IL	School-based
School District of Philadelphia (2004). Improved Language and Reading Skills by Students in the School District of Philadelphia who were Receiving Services for Special Education and who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(20): 1-4. 2004.	IGS	Short	WP	PA	School-based
School District of Philadelphia (2004). Improved Reading Achievement by Students in the School District of Philadelphia Who Used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(21): 1-6. 2004.	QED	Short	WP	PA	School-based
Scientific Learning Corporation (2004). Improved Language and Early Reading Skills by Students who used Fast ForWord Language to Reading. Maps for Learning: Product Reports, 8(1): 1-4. 2004.	QED	Short	WP	N/A	SLC
Scientific Learning Corporation (2004). Improved Language and Early Reading Skills by Students who used Fast ForWord Middle & High School. Maps for Learning: Product Reports, 8(2): 1-4. 2004.	QED	Short	WP	N/A	SLC
Shelby County School District (2004). Improved Language Skills by Students in Shelby County School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(26): 1-6. 2004.	IGS	Short	WP	AL	School-based
Springfield City School District (2004). Improved Ohio Reading Proficiency Test Scores by Students in the Springfield City School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(8): 1-6. 2004.	QED	Mid	WP	OH	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Stamford City School District (2004). Improved Cognitive and Early Reading Skills by Students in Stamford City School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(30): 1-4. 2004.	IGS	Short	WP	CT	School-based
Troia G. A. (2004). Migrant Students with Limited English Proficiency: Can Fast ForWord Language TM Make a Difference in Their Language Skills and Academic Achievement? Remedial and Special Education, Vol 25 2004.	QED	Short	MPRJ	N/A	Independent
Trumbull School District (2004). Improved Reading Comprehension by Students in the Trumbull School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(34): 1-4. 2004.	IGS	Short	WP	CT	School-based
Virginia Department of Correctional Education (2004). Improved Reading Skills by Students in the Virginia Department of Correctional Education who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(28): 1-5. 2004.	IGS	Short	WP	VA	School-based
Westwood Elementary School (2004). Improved Academic Achievement by Students at Westwood Elementary School who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(7): 1-5. 2004.	IGS	Short	WP	TN	School-based
Overbay, A. & Baenen N. (2003). E&R Report No. 03.24. Fast ForWord Evaluation, 2002 – 03. Eye on Evaluation. https://webarchive.wcpss.net/results/reports/2003/0324fastforward2003.pdf	QED	Short	WP	N/A	Independent
Escambia County School District (2003). Improved Language Skills by Students in the Escambia County School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 7(8): 1-6. 2003.	IGS	Short	WP	FL	School-based
Morlet T., Norman M., Ray B., Berlin C.I. (2003). Fast ForWord: Its scientific basis and treatment effects on the human efferent auditory system. In C.I. Berlin & T.G. Weyland (Eds.). The Brain and Sensory Plasticity: Language Acquisition and Hearing. Delmar Learning: Clifton Park, NY.	QED	Short	RP	N/A	University, Independent
Osceola County School District (2003). Improved Reading Skills by Students Receiving Special Education Services in the Osceola County School District. MAPS for Learning: Educator Reports, 7(1): 1-4. 2003.	IGS	Short	WP	FL	School-based

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Pacifica School District (2003). Improved Academic Skills of Low-Performing Students in the Pacifica School District who used Fast ForWord Products. MAPS for Learning: Educator Reports, 8(1): 1-7. 2003.	IGS	Short	WP	CA	School-based
Paradise Valley Unified School District (2003). Improved Language and Early Reading Skills of English-Language Learners in the Paradise Valley Unified School District who Used Fast ForWord Language. MAPS for Learning: Educator Reports, 7(7): 1-5. 2003.	IGS	Short	WP	AZ	School-based
Pocatello/Chubbuck School District #25 (2003). Improved Reading Skills by High School Students in Pocatello Chubbuck School District #25 who used Fast ForWord Middle & High School. MAPS for Learning: Educator Reports, 7(5): 1-4. 2003.	IGS	Short	WP	ID	School-based
School District of Philadelphia (2003). Improved Reading Vocabulary and Comprehension Skills by Students in the School District of Philadelphia Who Used Fast ForWord Language. MAPS for Learning: Educator Reports, 7(6): 1-4. 2003.	IGS	Short	WP	PA	School-based
Slattery C. (2003). The impact of a computer-based training system on strengthening phonemic awareness and increasing reading ability level. Thesis Ann Arbor, MI: ProQuest Information and Learning Company 2003.	RCT	Mid	Dissertation	MI	Independent
Temple E., Deutsch G. K., Poldrack R. A., Miller S. L., Tallal P., Merzenich M. M., and Gabrieli J. D. E. (2003). Neural deficits in children with dyslexia ameliorated by behavioral remediation: Evidence from functional MRI. Proceedings of the National Academies of Science 100(5): 2854-2859. 2003.	QED	Short	MPRJ	N/A	Independent
Troia G. A., Whitney S. D. (2003). A close look at the efficacy of Fast ForWord Language for children with academic weaknesses. Contemporary Educational Psychology, 28:464-495. 2003.	QED	Short	MPRJ	N/A	Independent
Waupun School District (2003). Improved Listening Comprehension for Middle School Students in the Waupun School District. MAPS for Learning: Educator Reports, 7(2): 1-4. 2003.	QED	Short	WP	WI	School-based
Habib M., et al. (2002). Phonological training in children with dyslexia using temporally modified speech: a three-step pilot investigation. International Journal of Language and Communication Disorders, 30(3): 289-308.	QED	Short	WP	N/A	Independent, University

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
Hall S. (2002). Final Report of the 2001-2002 Scientific Learning/ Fast Forward Program REIS02-168-2. Dallas ISD Division of Accountability and Evaluation 2002.	QED	Mid	WP	TX	Independent
Gillam R. B., Crofford J. A., Gale M.A., Hoffman L. V. M. (2001). Language changes following computer-assisted language instruction with Fast ForWord or Laureate Learning Systems Software. American Journal of Speech-Language Pathology, 10:231-247 2001.	QED	Short	MPRJ	N/A	Independent
Hook P. E., Macaruso P., Jones S., and Jones S. (2001). Efficacy of Fast ForWord training on facilitating acquisition of reading skills by children with reading difficulties—A longitudinal study. Annals of Dyslexia, 51, 75-96 2001.	QED	Long	MPRJ	N/A	Independent
Loeb D. F., Stoke C., Fey M. E. (2001). Language Changes Associated with Fast ForWord-Language: Evidence from Case Studies. American Journal of Speech-Language Pathology, 10: 216-230 2001.	IGS	Short	MPRJ	N/A	Independent
Thibodeau L. M., Friel-Patti S., Britt L. (2001). Psychoacoustic performance in children completing Fast ForWord training. American Journal of Speech-Language Pathology, 10:248-257 2001.	IGS	Short	MPRJ	N/A	Independent
Schopmeyer B., Mellon N., Dobaj H., Grant G., Niparko J. K. (2000). Use of Fast ForWord to enhance language development in children with cochlear implants. Annals of Otolaryngology, Rhinology, & Laryngology 109(12): 95-98. 2000.	QED	Short	MPRJ	N/A	Independent
Tallal P. (2000). Experimental studies of language learning impairments: From Research to remediation. Speech and language impairments in children: causes, characteristics, intervention and outcome, DMV Bishop and LB Leonard (Eds) Hove, AK: Psychology Press: 131-155 2000.	IGS	Short	MPRJ	N/A	University
Tallal P. (2000). The science of literacy: From the laboratory to the classroom. Proceedings of the National Academies of Science 97(6): 2402-2404 2000.	IGS	Short	MPRJ	N/A	University

Study / Reference	Research Design	Study Duration	Publication	State	Researchers
<p>Miller S. I., Merzenich M. M., Tallal P., DeVivo K., LaRossa K., Linn N., Pycha A., Peterson B. E., Jenkins W. M. (1999). Fast ForWord Training in Children with Low Reading Performance. Nederlandse vereniging voor Lopopedie en Foniatrie: Jaarcongres Auditieve Vaardigheden en Spraaktaal 1999.</p> <p>Scientific Learning Corporation (1997). Improved Language Skills by Children with Low Reading Performance who used Fast ForWord Language. MAPS for Learning: Product Report 3(1): 1-13. 1997. http://www.scilearn.com/alldocs/rsrch/30052FFWLanguageProdRpt.pdf</p>	RCT	Short	RP	N/A	SLC but peer-reviewed
<p>Scientific Learning Corporation (1999). National field trial results: Results of Fast ForWord training for children with language and reading problems. http://www.scilearn.com/alldocs/rsrch/30319Scienational.pdf</p>	IGS	Short	WP	N/A	SLC
<p>Tallal P, Miller S. L., Bedi G., Byma G., Wang X., Nagarajan S. S., Schreiner C., Jenkins W. M., Merzenich M. M. (1996). Language comprehension in language-learning impaired children improved with acoustically modified speech. Science, 271:81-84. http://www.scilearn.com/alldocs/rsrch/30316Sciepublish2.pdf</p>	QED	Short	MPRJ	N/A	SLC but peer-reviewed

Appendix 2

Research Studies using Fast ForWord Software with Experimental Designs

Study / Reference	Research Design	Participants	Results
Heim, S., et al. (2016).	Quasi-Experimental Design	21 children ages 6 to 9 with Language Learning Impairments (LLI) used the intervention. The comparison group was 12 children with typical language development.	The LLI group made significant improvements in standard measures of language (effect size: 0.6-0.8). In addition, changes in event-related potentials (ERPs) of the LLI group suggested enhanced auditory discrimination skills.
Zou, P., et al. (2016)	Randomized Controlled Trial	40 children administered radiation therapy as part of their medulloblastoma treatment. 19 children (age 11.7 +/- 0.6) received intervention during treatment. 21 children (age 12.1 +/- 0.6) received standard of care. 21 typically developing children (age 12.3 +/- 0.6) were also evaluated.	The children's development was followed for a couple years using functional magnetic resonance imaging (fMRI) and assessments of reading skills. An average of 2.5 years after the intervention, there were significant differences between the fMRIs of the treated children with those who received the intervention trending towards normative. In addition, those who received intervention had significantly better scores on tests of Sound Awareness.
Corbitt, C., et al. (2015).	Randomized Controlled Trial	144 students, age 5-14, attending public schools in Western Australia	A MANOVA indicated that students who used the Fast ForWord products made significantly greater gains on tests of language skills (CELF-4) and reading skills (Queensland University Inventory of Literacy).
Szelag, E., Skolimowska, J. (2014).	Randomized Controlled Trial	30 adults age 65-75 were randomly assigned to one of three groups: temporal training (Fast ForWord), computer games, no intervention.	Prior to training, there were no significant differences between the groups. After training, the group that had temporal training had significant improvements in temporal information processing, as well as attention and memory.
Björn, P.M., <u>Leppänen</u> , H.T. (2013).	Randomized Controlled Trial	The study comprised 38 native Finnish speaking 5 th graders. Twenty-four students struggling to learn to read (Finnish) and to acquire English were randomly assigned to an intervention and a control group. The remaining students were not struggling, and formed a second control group.	Compared to the randomized control group, the intervention group made statistically greater gains between the pre- and post-test in several decoding-related English reading skills including rapid digit naming, elision of phonological units, and auditory discrimination.

Study / Reference	Research Design	Participants	Results
Heim, S., et al. (2013).	Quasi-Experimental Design	33 children aged 6-9 took part in the study: 21 were diagnosed as having language impairments and formed the experimental group (LI), 12 had typically developing language, and were the comparison group (TD).	Electroencephalogram (EEG) recordings of the response to two tones separated by 70 ms showed a reduced amplitude and lack of phase locking to the second tone for early oscillations (45-70ms) in the gamma-band range (29-52 Hz) for children in the LI group relative to the TD group. Following Fast ForWord intervention, the amplitude was no longer reduced, phase locking increased, and language skills improved. Increases in phase locking were predictive of increases in language skills.
Rogowsky, B., et al. (2013).	Quasi-Experimental Design	53 college students took part in the study: 25 who demonstrated poor writing skills (13 English as a Second Language [ESL]) were in the experimental group; the comparison group was 28 from the general college population (6 ESL).	The group that received the Fast ForWord intervention made statistically greater improvements on reading scores (Gates-MacGinitie Reading Test) and writing scores (Oral and Written Language Scales (OWLS) Written Expression Scale).
St. Charles Parish Public Schools. (2013). 17(5)	Quasi-Experimental Design	The experimental group contained 584 students in elementary school (3 rd - 5 th grade) and 155 students in middle school (6 th grade).	Chi-square analysis indicated significant increases in the number of 3 rd and 4 th graders passing the state assessment (from 58% to 72% for 3 rd graders; from 61% to 80% for 4 th graders). A MANOVA showed a significant Time x Group effect indicating that 6 th graders who used the products improved more on the state assessment than 6 th graders who did not.
Craven County Schools. (2012). 16(12)	Quasi-Experimental Design	4,710 students at 22 schools including 990 students at 13 schools that used the Fast ForWord products. Students in military families and students receiving services for Special Education were targeted.	Using Change Scores to compare performance on the state assessment, students at schools that used Fast ForWord products improved more than students at schools that did not, and students within the Fast ForWord schools who used the products improved more than students within the Fast ForWord schools who did not use the products. More use → greater gains.
Davenport Community Schools. (2012). : Educator Briefings 16(3)	Randomized Controlled Trial	592 children age 3-5 attending one of 8 preschools. Students were randomly assigned to the experimental or comparison group.	Students in the experimental group used the Fast ForWord products February through May and made significantly greater improvements on their language skills as measured by the Preschool Language Scales – 4 th edition (PLS-4). Students' skills improved from the 41 st percentile to the 62 nd percentile.

Study / Reference	Research Design	Participants	Results
Clarke County School District (2011), 15(4)	Quasi-Experimental Design	1,061 Fast ForWord participants who began using products in five separate yearly cohorts.	Each cohort of Fast ForWord participants made significant gains on the CRCT after starting use of the products.
Grand Forks Public Schools (2011), 15(11)	Quasi-Experimental Design	32 Fast ForWord participants in 5 th grade and comparable 5 th grade non-participants	MANOVA indicates that 5 th graders who used Fast ForWord products made greater gains than a group of comparable 5 th graders across the MAP Reading, Language, and Math tests.
Worcester Public Schools (2011), 15(6)	Quasi-Experimental Design	178 Fast ForWord participants 205 Comparison students	Fast ForWord participants made greater gains on the MAP than the comparison group. The result was statistically significant for LEP and General Education students ($p < 0.05$), and approached significance for Special Ed students ($p < 0.10$).
Lawrence Public Schools (2010)	Quasi-Experimental Design	620 Fast ForWord participants and comparable non-participants	After two years of product use, the Fast ForWord participants had significantly larger gains on the MAP.
Cleveland Heights-University Heights (2010), 14(5)	Quasi-Experimental design	414 Fast ForWord Participants 464 Non-participants	The 3 rd and 5 th grade Fast ForWord participants significantly outperformed the comparison group on the OAA test. The 4 th graders in both groups were statistically comparable.
Rogowski, B. Dissertation (2010)	Randomized Controlled Trial	81 students in 6 th grade randomly assigned to either Fast ForWord or the control group	Students were evaluated on the Writing Expression Scale from the OWLS. Fast ForWord students made about 1 SD improvement, with significant post-test differences between the two groups.
Russo, N., et al. (2010)	Quasi-Experimental Design	5 male Fast ForWord participants 6 male comparison group students	All five Fast ForWord participants improved more than one standard deviation on at least two of eight tests.
Clarke County School District (2009), 13(1)	Quasi-Experimental Design	2,257 students across three cohorts: 571 students who started in 2006-2007 758 students who started in 2007-2008 928 students who started after 2008	On the 2006-07 CRCT, 40% of Fast ForWord participants advanced to proficiency, compared to 27% of comparison group students. On the 2007-08 CRCT, 42% of Fast ForWord participants advanced to proficiency, compared to 27% of comparison group students.

Study / Reference	Research Design	Participants	Results
Davenport Community Schools (2009)	Randomized Controlled Trial	122 Fast ForWord participants 122 non-participants (randomly selected control)	The Fast ForWord group improved from the 36th percentile in November up to the 59th percentile in May on the Preschool Language Scales, 4 th Edition. This gain was statistically larger than the gains made by the control group.
Scientific Learning Corporation (2009), 13(13)	Quasi-Experimental Design	685 Reading Assistant participants with southern dialects, ages 6 to adult (76 used in model verification)	Reading Assistant Expanded Edition's acoustic model set has a false negative rate that is 30% lower than the original acoustic model for Southern dialect speakers.
Sutherland M. (2009), 13(11)	Quasi-Experimental Design	175 Fast ForWord participants. Unspecified number of non-randomly selected non-participants in the comparison group.	Fast ForWord participants at the middle and high school made greater improvements in their reading achievement on the GMRT than students in the comparison group. Average improvement for the participants was more than 7 months over 18 weeks between assessments.
Gillam, et al. (2008)	Randomized Controlled Trial	216 students were randomly assigned to one of four groups: Fast ForWord Language, academic enrichment, computer-aided language intervention, or an individual language intervention.	Fast ForWord use led to gains that were as large as those in the active control group, who received 50 hours of one-on-one work with a speech and language therapist.
Krumpe J., Harlow S. (2008)	Quasi-Experimental Design	58 students in grades 2-12. 21 students had prior diagnosis of language-related impairment, and the remaining 37 had received no diagnoses but had experienced various school-related learning difficulties.	Both groups had significant increases in adjusted gain scores on both Receptive and Expressive Language portions of the CELF-3 examination with effect sizes of 0.49 and 0.50, respectively. No difference was found between the gains made by the diagnosed and undiagnosed groups.
Lawrence Public Schools, Massachusetts (2008), 12(11)	Quasi-Experimental Design	MAP Analysis: 220 Fast ForWord participants and 400 comparison students. MCAS Analysis: 54 Fast ForWord participants and 123 comparison students.	On both the MAP and MCAS tests, Fast ForWord students made significantly larger gains during the three year longitudinal study period than comparison group students. Fast ForWord students closed and eliminated the reading achievement gap with their peers.
Rogers School District, Arkansas (2008), 12(8)	Quasi-Experimental Design	21 students in grades 9-12. 10 students used Fast ForWord products, and 11 did not.	Students who completed the Fast ForWord content made significant improvements in their reading skills. Students who completed more of the Fast ForWord content achieved greater improvements in their reading skills than students who completed less of the content.

Study / Reference	Research Design	Participants	Results
Scientific Learning Corporation (2008), 12(17)	Quasi-Experimental Design	104 students in grades 6-8. 56 used the 30-minute protocol; 48 used the 50-minute protocol.	Students made statistically significant improvements in reading skills regardless of the protocol that was used. The magnitude of the reading gains were not statistically different and students using the different protocols reached similar high levels of product completion.
Scientific Learning Corporation Briefing: RA Impact (2008)	Quasi-Experimental Design	410 students in grades 2-5; 228 used Reading Assistant, 182 did not. Students were assessed using the Standard Oral Reading Fluency Assessment Passages	Students who used the Reading Assistant made significantly greater gains in words correct per minute (WCPM) than students who received their standard reading curriculum alone. In addition, the Reading Assistant group exceeded expectations for fluency gains.
Scientific Learning Corporation Briefing: Language vs Language v2 (2008)	Quasi-Experimental Design	14,633 students who completed Fast ForWord Language and 1,650 students who completed Fast ForWord Language v2.	Both products provide similar total reading gains, but students using Fast ForWord Language v2 made their reading gains at a much faster rate and required less than half the number of calendar days to complete the product. Overall, Fast ForWord Language v2 is a faster, more efficient, and more intense reading intervention product.
Stevens C., et al. (2008)	Quasi-Experimental Design	33 children between ages 6 and 8. 20 students used Fast ForWord products - 8 had specific language impairment, 12 had typically developing language skills. 13 students received no intervention.	The Fast ForWord participants' CELF-3 receptive language scores improved significantly relative to the non-participants. In addition, Fast ForWord participants showed larger increases in the effects of attention on neural processing than non-participants.
Boone County School District and El Campo School District, Kentucky and Texas (2007), 11(19)	Quasi-Experimental Design	101 students (1 first grader, 90 second graders, 10 third graders). 47 used a 30-minute protocol, 54 used a 50-minute protocol. Kentucky and Texas schools.	Students using both protocols reached similar high levels of product completion. On average, both groups made statistically significant gains in the reading fluency skills of sight word efficiency and phonemic decoding efficiency.
Boone County School District, Kentucky (2007)	Quasi-Experimental Design	53 second grade students. 24 used a 30-minute protocol, 29 used a 50-minute protocol.	Students using both protocols reached similar high levels of product completion. Both groups made statistically significant gains in letter-sound skills. Phonological awareness performance increased for students who had struggled with phonological awareness prior to using Fast ForWord.

Study / Reference	Research Design	Participants	Results
Gaab, et al. (2007)	Quasi-Experimental Design	55 children, 22 with dyslexia, 23 typical-reading.	After using Fast ForWord products, the dyslexic children displayed enhanced responsiveness to rapid auditory transitions of non-verbal sounds, accompanied by significant improvements in language and reading skills. The gains made in listening comprehension, phonological awareness, phonological memory, and alternate phonological awareness brought the dyslexic group into parity with the typical-reading group.
Lakshminarayanan K. and Tallal P. (2007)	Randomized Controlled Trial	43 college students age 18-25. 20 control, 23 intervention.	Students who used a Fast ForWord product to develop skills needed to identify FM sweeps showed significant improvements in their speech discrimination thresholds (particularly /ba/-/da/ discrimination) as compared to a control group.
Lancaster County School District, South Carolina (2007)	Quasi-Experimental Design	50 first-grade students attending an elementary school; half of the students used the 30-minute protocol of the Fast ForWord to Reading 1 product, the other half used the 48-minute protocol.	Students using the 30-minute and 48-minute daily protocols reached similar high levels of product completion over an average of 43 and 23 days of product usage, respectively. On average, students made statistically significant improvements after Fast ForWord to Reading 1 use, with both 30-minute and 48-minute protocol groups making similar gains on the important reading skills of phonological awareness and letter sound knowledge.
Niagara Falls City School District, New York (2007)	Quasi-Experimental Design	329 second grade students. 235 used Language (but not Reading). 71 students used Language and Reading.	Reading scores improved by an average of 12 months between pre-test and post-test. The Language (but not Reading) students made significant gains in both vocabulary and comprehension. The Language and Reading students made significant gains in comprehension, but not in vocabulary.
Pawhuska School District, Oklahoma (2007)	Quasi-Experimental Design	49 third graders. 22 used a 30-minute protocol, 25 used a 48-minute protocol.	Students using both protocols reached similar high levels of product completion. Both groups of students made statistically significant improvements in vocabulary skills and made smaller gains in comprehension skills after Fast ForWord Reading 2 participation.
Scientific Learning Corporation (2007), 11(21)	Quasi-Experimental Design	114 students (1 sixth grader, 112 seventh graders, 1 eighth grader). 78 students used Reading 4, 36 used Reading 5.	Students using both protocols reached similar high levels of product completion. Both groups of students made statistically significant improvements in reading skills.

Study / Reference	Research Design	Participants	Results
Sonic Hearing, Australia (2007), 10(36)	Randomized Controlled Trial	144 students attending four public primary schools between the ages of 5 and 14 (72 Fast ForWord; 72 comparison)	Fast ForWord participants made significantly better gains on a battery of language and literacy tests than the comparison group. They improved from the 12 th percentile to the 25 th percentile in Literacy skills, from the 12 th percentile to the 21 st percentile in Receptive Language skills, and from the 10 th to the 18 th percentile in Expressive Language skills.
South Euclid – Lyndhurst School District, Ohio (2007)	Quasi-Experimental Design (subjects compared to estimate of the national 25 th percentile)	194 students from second through ninth grade.	Students who used Fast ForWord products had 16% greater improvement than students at comparable levels, and in comparable grades. The improvements of students with above-average participation levels outpaced those of comparable students who did not use Fast ForWord products by 39%
South Madison Community School Corporation, Indiana (2007), 11(34)	Quasi-Experimental Design	156 students in 2 nd through 5 th grade. 78 used Fast ForWord, 78 were in the comparison group.	On average, the Fast ForWord group had greater gains in Reading, Language, and Math than the comparison group. Average improvement in Reading for the Fast ForWord group was 7 points compared to a gain of 0.6 points by students in the comparison group.
Washington Local School District, Ohio (2007)	Randomized Controlled Trial	152 seventh graders from an urban junior high school (84 Fast ForWord; 68 comparison)	On average, the Fast ForWord students 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.
Adams, M.J. (2006)	Quasi-Experimental Design	410 students in 2 nd – 5 th grade at two different schools. 2 nd and 3 rd graders at one school and 4 th and 5 th graders at the other school served as the experimental group. The remaining students were in the control group.	During the period of the study, students in the experimental group made significantly greater gains in fluency than students in the comparison group, as measured by words read per minute. Students in the experimental group also gained more than expected based on norms.
Boone County School District, Kentucky (2006), 10(15)	Quasi-Experimental Design	97 students, grades 2 through 5 from suburban elementary schools (43 Fast ForWord; 54 comparison)	On average, the Fast ForWord students made improvements on the Reading portion of the Scantron Performance Series.

Study / Reference	Research Design	Participants	Results
Borman G and Benson J. (2006)	Randomized Controlled Trial	415 students; 141 second grade students and 274 third grade students	The study used an intent-to-treat model. The group intended to use Fast ForWord did not show significantly larger improvement in their language and reading comprehension outcomes than the control group. The authors suggest that this may be due to poor implementation fidelity at a number of the sites.
Hicksville School District, Ohio (2006)	Randomized Controlled Trial	149 fifth and sixth graders from a rural elementary school (62 Fast ForWord; 87 comparison)	On average, the Fast ForWord students 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.
LifeLong Learning, Planegg, Germany (2006)	Randomized Controlled Trial	22 native German speakers attending a college preparatory school; age range was 11 through 13 (11 Fast ForWord; 11 comparison)	At the start of the study, students in both groups showed deficits only in the skills measured by the Test of Auditory-Perceptual Skills: Revised or Upper Level, with average scores below the first percentile. By the end of the study, Fast ForWord students showed significant gains, moving up to the 9 th percentile; by the end, the Fast ForWord group significantly outperformed the comparison group on this measure.
Manchester City School District, Tennessee (2006)	Quasi-Experimental Design	161 first- and second-grade students in a rural elementary school (85 Fast ForWord; 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.
Maryland School District, (2006)	Randomized Controlled Trial	48 Kindergarten students attending an elementary school: 25 used Fast ForWord to Reading Prep and 23 were the comparison group	On average, both the experimental and comparison groups improved significantly in reading ability as measured by the DIBELS, WJ III, CELF-3, and TOOL. A MANOVA of the Letter-Word Identification subtest of the WJ III revealed that students who used Fast ForWord significantly outperformed the comparison group.
Pocatello/Chubbuck School District #25, Idaho (2006)	Quasi-Experimental Design	34 students used Fast ForWord to Reading products sequentially; 20 students served as a comparison group	On average, the Fast ForWord students 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.

Study / Reference	Research Design	Participants	Results
School District 16, New Brunswick, Canada (2006)	Quasi-Experimental Design	121 second graders (75 Fast ForWord; 46 comparison). Some of the students from each group were in a French immersion program	The Fast ForWord group significantly outperformed the comparison group on the TACL-3 subtests. Average improvement on the subtests were nearly one standard deviation, with the Fast ForWord group's overall language score moving from the 45 th percentile to the 81 st percentile.
Cohen, et al. (2005)	Randomized Controlled Trial	77 language-impaired students age 6-10. 23 students used Fast ForWord, 27 used alternative computer software, and 27 were controls	The study used an intent-to-treat model with a low fidelity implementation. All three groups made statistically significant gains in the scores for the primary outcome measures of Expressive and Receptive Language on the CELF-3 at both the 9-week and 6-month follow-up points. The Fast ForWord group improved their scores on the Phonological Assessment Battery's Rhyme subtest at 6-months more than the other groups.
Lancaster School District, South Carolina (2005), 9(8)	Randomized Controlled Trial	50 3 rd graders at a rural elementary school (25 Fast ForWord; 25 comparison)	Fast ForWord results- average improvement on sight word and decoding portions of TOWRE test were significantly higher than the comparison group.
Ohio, Texas, and South Carolina School Districts, Reading 1 Product Report (2005)	Randomized Controlled Trial (random selection within each of three schools)	197 1 st and 2 nd graders from three schools in three different school districts in three different states (98 Fast ForWord; 99 comparison)	Fast ForWord results - average improvements on both the phonological awareness and letter-sounds portions of the TOPA assessments were significantly greater than the improvements of the control group.
Petal School District, Mississippi (2005)	Quasi-Experimental Design	84 students	Subgroups of students made gains on Reading and/or Language subtests that exceeded the predicted gains set forth by the Mississippi Curriculum Test prediction model.
School District of Philadelphia, Pennsylvania (2005)	Quasi-Experimental Design	39 kindergarten students used FFW Basics, then FFW Language and FFW Language to Reading.	Kindergarten students who used Fast ForWord products made significantly greater gains on the DIBELS test of Nonsense Word Fluency than students in a comparison group.
Seminole County School District, Florida, (2005)	Randomized Controlled Trial	38 first and second grade students (15 second grade and 23 third grade students).	The Fast ForWord group had significantly greater improvements over time than the comparison group. These results were consistent across grade, academic ability, and previous Fast ForWord use.

Study / Reference	Research Design	Participants	Results
Springfield City School District, Ohio (2005)	Randomized Controlled Trial	100 first and second grade students.	Students who used Fast ForWord products made significant improvements in the area of phonemic awareness. First graders who used the Fast ForWord to Reading 1 product had significant improvements in early reading skills, but second graders did not.
Todd County School District, Rosebud, South Dakota (2005)	Quasi-Experimental Design	21 4 th graders at an elementary school on the Rosebud Sioux Reservation in rural South Dakota (11 Fast ForWord; 10 comparison)	Fast ForWord results - average improvement on Scantron Performance Series Reading test and the DIBELS early literacy skills test was significantly greater than that of the control group.
Berlin School District, Wisconsin (2004)	Quasi-Experimental Design	76 second through fourth grade students, including one special education class.	The students in the Fast ForWord group made greater gains than the comparison group in Passage Comprehension and Word Attack.
Brainerd School District, Minnesota (2004)	Quasi-Experimental Design	70 students between 7 and 12 years old. 39 students used Fast ForWord, 31 served as a comparison group	The students in the Fast ForWord group made significantly greater gains in their reading ability than the comparison group.
Cherry Hill Public School District, New Jersey (2004)	Quasi-Experimental Design (no specifics on selection of comparison group)	73 "struggling" K-5th graders (51 Fast ForWord; 22 comparison)	Improvements in receptive and expressive language scores for the Fast ForWord group (CELF-3 test) were significantly higher than for the comparison group, with Fast ForWord average scores improving from the below average to average range, while comparison group averages remained below average.
Cobb County School District, Georgia (2004)	Quasi-Experimental Design (no specifics on selection of comparison group)	61 elementary school students (30 Fast ForWord; 31 comparison)	Relative to the comparison group, Fast ForWord students made significantly greater gains in reading skills.
Hall S., et al. (2004)	Quasi-Experimental Design	1,349 students in the Dallas Independent School District	Fast ForWord participation had a statistically significant impact on standardized scores in both reading and mathematics. Higher completion rates had a statistically significant correlation with higher reading scores.

Study / Reference	Research Design	Participants	Results
Marion C. G., East Tennessee State Univ. (2004)	Quasi-Experimental Design (statistical matching of control and Fast ForWord groups)	349 5th-6th graders (215 Fast ForWord; 134 comparison)	Fast ForWord students scored significantly higher in language and reading (Terra Nova test) than the comparison group.
Mora School District, Mora, Minnesota (2004)	Randomized Controlled Trial	23 3rd graders (18 Fast ForWord; 5 comparison)	Fast ForWord students showed gains in oral language ability that were significantly higher than those observed in the comparison group, with average FAST FORWORD improvements ranging from one-half to two-thirds of a standard deviation in assessment scores.
Pawhuska School District, Oklahoma Harlandale School District, Texas (2004)	Quasi-Experimental Design (no specifics on selection of comparison group)	112 3rd graders (70 Fast ForWord; 42 comparison)	Across several subtests, Fast ForWord students improved their achievement scores significantly more than comparison group students, with Fast ForWord participants improving by more than 60% more than comparison group students.
Pokorni J., et al. (2004)	Quasi-Experimental Design	54 students, approximately 8 years old. 20 used Fast ForWord, 16 used Earobics, 18 used LiPS	The study used a low fidelity implementation and reported positive results on a small number of performance measures. LiPS students had significantly better phoneme blending scores at post-test than the Fast ForWord and Earobics groups. At 11 months after post-test, all three groups showed significant improvement in phonemic awareness and the Fast ForWord group showed significant improvement in sentence recall.
Rouse, C. and Krueger, A. (2004)	Randomized Controlled Trial	485 third through sixth grade students	The study used an intent-to-treat model with a low fidelity implementation. They found no significant differences between the group intended to use Fast ForWord and control groups.

Study / Reference	Research Design	Participants	Results
School District of Philadelphia, Pennsylvania (2004)	Quasi-Experimental Design	315 students from 16 elementary schools. Students were from 2 nd through 8 th grade, with majority (94%) in 4 th and 5 th grades	Students were divided into three groups: Group 1 started FFW in Fall quarter, Group 2 started FFW in Winter quarter, Group 3 did not use FFW. Students who used Fast ForWord products achieved an average improvement of 0.76 years, a significantly greater improvement than that of the comparison group.
Scientific Learning Corporation (2004), 8(2)	Quasi-Experimental Design	104 students (69 used Fast ForWord, 35 did not)	The group using Fast ForWord showed significantly greater improvements in phonological memory, phonological awareness, receptive language, and expressive language than the control group.
Scientific Learning Corporation (2004), 8(1)	Quasi-Experimental Design	50 students age 6 - 12.	Students in the Fast ForWord group made significantly greater improvements in their early reading skills, including vocabulary and overall language abilities, than the control group.
Springfield City School District, Ohio (2004)	Quasi-Experimental Design (post-hoc random selection from total population)	91 4th graders at a Title I school (41 Fast ForWord; 50 comparison)	Fast ForWord results - average group improvement of 14.5 points on state-level assessment was significantly greater than improvement observed in the comparison group.
Troia G. A, University of Washington (2004)	Quasi-Experimental Design (Multi-site study using randomized or matching to assign student to experimental or control groups)	191 students in 1st through 6 th grade participated in the study. Students were from seven public elementary schools located in Central Washington.	Students were assessed on measures of phonological awareness, spoken English language proficiency, oral language competency, basic reading skills and classroom behavior. Students less fluent in spoken English in the intervention group demonstrated superior gains in expressive language, sight-word recognition, and pseudo-word decoding. Intervention-specific gains for students with a native English language background were limited to measures of sight-word reading.
Baenen, et al. (2003)	Quasi-Experimental Design	616 students from grades 1 through 7	Fast ForWord users made significant gains in reading End-of-Grade (EOG) scores at all grades except grade 6. However, participants' post EOG scores were not significantly different than those of matched students.

Study / Reference	Research Design	Participants	Results
Morlet, et al. (2003)	Quasi-Experimental Design (control group - typical students)	31 children with SLI and/or Central Auditory Processing Disorders (CAPD)	Evaluated auditory brainstem responses in children with SLI. Found that following Fast ForWord, medial olivocochlear system function increases concomitant with improvement in language skills. In children with CAPD, middle latency responses also normalize following Fast ForWord.
Slattery, C.A., Widener University (2003)	Randomized Controlled Trial	60 3rd-5th graders reading below grade level (30 Fast ForWord; 30 comparison)	Fast ForWord students made significantly greater gains in phonemic awareness and reading ability than the comparison group (Yopp-Singer and QRI-II tests).
Temple E., et al. (2003)	Quasi-Experimental Design	32 students, 12 typical-reading, 20 dyslexic	Both groups used Fast ForWord products. The dyslexic group showed significant improvement in real-world reading, pseudo-word decoding, and passage comprehension. Fast ForWord use resulted in changes in brain function that include left hemisphere language regions, right hemisphere homologues, and a number of other brain areas. Some of the changes brought the brain function of children with dyslexia closer to that seen in normal-reading children, whereas other changes seemed to be compensatory in nature.
Troia and Whitney (2003)	Quasi-Experimental Design (control group selected to match characteristics of Fast ForWord Group)	37 1st-6th graders with poor academic performance (25 Fast ForWord; 12 comparison)	Fast ForWord students improved their scores more than comparison group students on 11 out of 13 sub-tests, although gains were only statistically significant for two sub-tests.
Waupun School District, Wisconsin (2003)	Quasi-Experimental Design (control group selected to match characteristics of Fast ForWord Group)	46 middle school students performing at grade level (32 Fast ForWord; 14 comparison)	Students using Fast ForWord 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).

Study / Reference	Research Design	Participants	Results
Habib, et al. (2002)	Quasi-Experimental Design (three separate studies with various intervention groups and comparison groups)	<p>Study 1 - 12 students with dyslexia</p> <p>Study 2 - 29 students with dyslexia divided into three age groups: 5-6 (n=9) 7-8 (n = 10) 9-12 (n=10)</p> <p>Study 3 - 23 students with dyslexia; 10 age-matched controls; 10 ability-matched controls</p>	<p><u>Study 1</u> - Students received phonological awareness training using temporally modified speech versus using natural speech showed a modified speech “treatment effect” on measures of phonological awareness.</p> <p><u>Study 2</u> - Significant improvements in phonological awareness skills were seen across age groups following training for 15 minutes per day for six weeks.</p> <p><u>Study 3</u> - Children with dyslexia performed a voice onset task with similar accuracy to ability matched controls – below the ability of age-matched controls. Improvement on temporal order judgment task was a good indicator of benefit of training on phonological awareness tasks.</p>
Gillam R. B., et al. (2001)	Quasi-Experimental Design	4 children, two of which were identical twins.	2 children used Fast ForWord and 2 used Laureate Learning Systems (LLS). One of each pair began using the intervention immediately and the other used it after a delay of several weeks. Fast ForWord and LLS use yielded similar gains on a formal language test and on language sample measures.
Hook, et al. (2001)	Quasi-Experimental Design	20 students, 7 to 12 years old. 11 used Fast ForWord, 9 did not.	The Fast ForWord group made significant gains in phonemic awareness immediately after intervention. The Fast ForWord group also made significant gains in spoken language, specifically in speaking and syntax.
Schopmeyer, et al. (2000)	Quasi-Experimental Design (results from period of non-use served as comparison group)	11 children with cochlear implants aged 5-11 (observed in period with no Fast ForWord, again in period of Fast ForWord)	On test-retest results, children with cochlear implants experienced significantly higher gains in auditory perception and memory (TAPS, Token tests) after using Fast ForWord than during a period when they had not used Fast ForWord.
Miller S, et al. (1999)	Randomized Controlled Trial	452 academically at-risk K-3rd graders (288 Fast ForWord; 164 controls)	Fast ForWord students demonstrated a statistically greater gain than comparison group students in auditory comprehension and phonemic awareness (TAFL & PAT tests).

Study / Reference	Research Design	Participants	Results
Tallal P, et al.. (1996)	Quasi-Experimental Design (control group selected to match characteristics of Fast ForWord Group)	22 Language-Learning Impaired students aged 5-10 (11 Fast ForWord; 11 comparison)	Fast ForWord students improved their scores more than comparison group students on several language ability tests, with overall improvements for Fast ForWord students significantly higher than for the comparison group.

Notes to Table:

Participant counts include only participants whose results were evaluated in pre/post score differences.

Abbreviations & Definitions:

Randomized Control Trial (RCT) – Two group study where participants are randomly assigned to groups.

Quasi-Experimental Design (QED) – Two group study where participants are assigned to groups but not randomly. For example, students in one school or in one class form one group, students in the other school or other class form the comparison group.

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Appendix 3:

A Selection of Peer-Reviewed University Studies on Scientific Learning's Products

There are numerous studies that have been done on the Fast ForWord and Reading Assistant software. Most of the studies have been initiated by schools using the products; the schools select the students, administer the assessments, collect the results, and use the services of the Scientific Learning Research Department to assist in the analysis and reporting of the results. Other studies have been driven by researchers at universities. A few studies, typically the Product Reports, were initiated by Scientific Learning personnel.

Summaries of many of the studies are available on the Scientific Learning Results webpage (www.scilearn.com/results). In the case of university-based studies, the reports are summaries of the studies, and the original studies are cited.

A list of selected university-based peer-reviewed studies follows:

Auburn University

Krishnamurti, S., Forrester, J., Rutledge, C., Holmes, G.W. (2013). A case study of the changes in the speech-evoked auditory brainstem response associated with auditory training in children with auditory process disorders. *International Journal of Pediatric Otorhinolaryngology*, 77(4)594.604.

[http://www.ijporonline.com/article/S0165-5876\(13\)00008-6/fulltext](http://www.ijporonline.com/article/S0165-5876(13)00008-6/fulltext) (subscription required)

Capella University

Fischer, S. (2015). Use of the Fast ForWord Language program to improve reading scores of secondary level Special Education students. Doctor of Education dissertation. Capella University.

Full Report: <https://search.proquest.com/openview/929c5c4e98e7de9cbd31eb86729279ec/1?pq-origsite=gscholar&cbl=18750&diss=y> (paid access)

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.

Summary: <http://www.scilearn.com/sites/default/files/imported/alldocs/rsrch/sbr/30156graingerctyedubrief.pdf>

Full Report: <http://dc.etsu.edu/cgi/viewcontent.cgi?article=2054&context=etd>

Harvard Medical School / Massachusetts Institute of Technology

Gaab, N., Gabrieli, J.D.E., Deutsch, G.K., Tallal, P., Temple, E. (2007). Neural correlates of rapid auditory processing are disrupted in children with developmental dyslexia and ameliorated with training: An fMRI study. *Restorative Neurology and Neuroscience*, 25: 295-310.

Abstract: <http://www.ncbi.nlm.nih.gov/pubmed/17943007>

Full Report: <http://content.iospress.com/articles/restorative-neurology-and-neuroscience/rnn253412>

Nencki Institute of Experimental Biology/University of Social Sciences and Humanities (Warsaw, Poland)

Szelag, E., Skolimowska, J. (2014). Time perception in aging: Age-related cognitive and temporal decline is reduced by intensive temporal training. *Procedia - Social and Behavioral Sciences* 126:109-110.

Proceedings: <http://www.sciencedirect.com/science/article/pii/S1877042814018801#>

Northwestern University

Russo, N.M., Hornickel, J., Nicol, T., Zecker, S., & Kraus, N. (2010). Biological changes in auditory function following training in children with autism spectrum disorders. *Behavioral and Brain Functions*, 6(60)1-8.

Full Report: <http://www.behavioralandbrainfunctions.com/content/6/1/60>

Rutgers University

Heim, S., Choudhury, N., Benasich, A.A. (2016). Electrocortical dynamics in children with a language-learning impairment before and after audiovisual training. *Brain Topography*, 29(3), 459-476.

Full Report: <https://link.springer.com/article/10.1007/s10548-015-0466-y>

Heim, S., Keil, A., Choudhury, N., Thomas Friedman, J., Benasich, A.A. (2013). Early gamma oscillations during rapid auditory processing in children with a language-learning impairment: Changes in neural mass activity after training. *Neuropsychologia*, 51(5)990-1001.

Full Report: <http://www.sciencedirect.com/science/article/pii/S0028393213000171?via%3Dihub>
(subscription required)

Rutgers University / University of California, San Francisco (studies completed before the founding of 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.

Summary: <http://www.scilearn.com/alldocs/rsrch/30315Sciepublish1.pdf>

Full Report: <http://science.sciencemag.org/content/271/5245/77> (subscription required)

Tallal, P., Miller, S. L., Bedi, G., Byma, G., Wang, X., Nagarajan, S.S., Schreiner, C., Jenkins, W. M., & Merzenich, M. M. (1996). Language comprehension in language-learning impaired children improved with acoustically modified speech. *Science*, 271, 81-84.

Summary: <http://www.scilearn.com/alldocs/rsrch/30316Sciepublish2.pdf>

Full Report: <http://science.sciencemag.org/content/271/5245/81> (subscription required)

Stanford University

Temple, E., Poldrack, R. A., Protopapas, A., Nagarajan, S., Salz, T., Tallal, P., Merzenich, M. M., & Gabrieli, J. D. E. (2000). Disruption of the neural response to rapid acoustic stimuli in dyslexia: Evidence from functional MRI. *PNAS*, 97(35), 13907-13912.¹

Full Report: (<http://www.pnas.org/cgi/content/abstract/240461697>)

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>

The Johns Hopkins School of Medicine

Schopmeyer, B., Mellon, N., Dobaj, H., Grant, G., & Niparko, J. K. (2000). Use of Fast ForWord to enhance language development in children with cochlear implants. *The Annals of otology, rhinology & laryngology. Supplement*, 185, 95-8.

Full Report: <http://www.annals.com/> (subscription required)

University of Jyväskylä (Jyväskylä, Finland)

Björn, P.M., Leppänen, H.T. (2013). Accelerating decoding-related skills in poor readers learning a foreign language: a computer-based intervention. *Educational Psychology: an International Journal of Experimental Educational Psychology*, 33(6).

DOI:10.1080/01443410.2013.797336

Abstract: <http://www.tandfonline.com/doi/abs/10.1080/01443410.2013.797336>

Full report: <http://www.tandfonline.com/doi/abs/10.1080/01443410.2013.797336> (paid access)

University of Oregon

Stevens, C., Fanning, J., Coch, D., Sanders, L., & Neville, H. (2008) Neural mechanisms of selective auditory attention are enhanced by computerized training: Electrophysiological evidence from language-impaired and typically developing children. *Brain Research*, 1205, 55 – 69.

Abstract: <http://www.sciencedirect.com/science/article/pii/S0006899308002977>

Full report: <http://www.sciencedirect.com/science/article/pii/S0006899308002977> (paid access)

Widener University

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

Summary: <http://www.scilearn.com/alldocs/rsrch/sbr/30185bethlehemedubrief.pdf>

* Scientific Learning personnel who co-authored this study were involved in designing and planning the study, but were not involved in the implementation of the study: assessing the students, analyzing the results, or reporting the results.

Wilkes University

Rogowsky, B. (2010). The Impact of Fast ForWord on Sixth Grade Students' Use of Standard Edited American English. Doctor of Education dissertation, Wilkes University.

Full Report: <http://gradworks.umi.com/34/32/3432348.html>