

TIMELINE OF RESEARCH, EDUCATIONAL, LEGISLATIVE, AND ADVOCACY EVENTS RELATED TO READING

Three decades of research on reading instruction sponsored by the National Institute of Child Health and Human Development (NICHD) conducted at more than 40 sites in the United States and in other nations has been the subject of discussion but has not had serious challenge as to its veracity and validity. (Sweet, 2004)

1976 (July) [Virginia Branch of the International Dyslexia Association](#) (VBIDA) established

1988 [National Assessment of Educational Progress](#) (NAEP) - first grant funded in 1969;

1990s - Reading assessments were conducted on a trial basis, made permanent in 1996; a stagnation, though, of 4th grade NAEP reading scores has occurred between 2007 and 2015 (NAEP, National Center for Education Statistics, 2016; Moats, 2017)

1997 [Elementary Secondary Education Act](#) (ESEA) – included greater accountability standards to include all students in high-stakes testing

1997 Reid Lyon’s testimony provided before the House of Representatives – Hearing on Literacy: Why Kids Can’t Read

1998 (late Fall) [Reading Excellence Act](#) - authorized professional development around scientifically based reading instruction and providing a definition

1998 [Preventing Reading Difficulties in Young Children](#) (Snow, Burns, and Griffin) – publication of the National Research Council consensus report, supported by NICHD and the U. S. Department of Education

2000 (April) [National Reading Panel](#) - published its report indicating the essential components include explicit, systematic instruction in phonemic awareness, phonics, fluency, vocabulary development, and comprehension strategies.

2002 (January) [No Child Left Behind](#) (ESEA) – it included Title I provisions applying to disadvantaged students. It supported standards-based education reform based on the premise that setting high standards and establishing measurable goals could improve individual outcomes in education. The Act required states to develop assessments in basic skills. To receive federal school funding, states had to give these assessments to all students at select grade levels. (Robert Pasternak, Assistant Secretary for OSERS and Reid Lyon, NIH); established Reading First and by October 1, 2003 approximately \$1.9 billion in 2002 funding had been distributed to all 50 states to implement the Reading First program.

2002 (March) [Definition of dyslexia in Virginia Administrative Code](#) - Virginia adopted the definition of dyslexia developed by National Institute of Health

2002 (November) [Institute of Educational Sciences](#) –created as the nation’s leading source for rigorous, independent education research, evaluation and statistics; [What Works Clearinghouse](#) (created in 2002) reviews research to support evidence based educational decisions

2002 (November) [Definition of dyslexia adopted by International Dyslexia Association](#) (IDA)

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2003 – 2010 [Reading First in Virginia](#) – provided professional development to teachers on scientifically based reading instruction;

2004 – [Individuals with Disabilities Improvement Education Act](#) (IDEA reauthorization)

2010 (March) [SJ 87 Study of Dyslexia Screening for Kindergartners](#) – requests the Department of Education to study dyslexia screening for kindergartners. In conducting its study, the Department shall (i) examine available scientific data on the success of early screening for dyslexia, (ii) consider the cost-effectiveness of such strategy, and (iii) make recommendations as to whether such screening is advisable and, if so, the particular method that is most effective; [Study of Dyslexia Screening for Kindergartners](#) report issued from VDOE in August 2010

2010 [Knowledge and Practice Standards for Teachers of Reading](#) – International Development Association (IDA) development and publication of these standards to improve reading instruction through an understanding of teacher knowledge necessary to deliver improved reading instruction

2011 (February) [Virginia State Literacy Plan](#) - The Virginia Department of Education (VDOE) applied for and received a grant from the U.S Department of Education (USED) in November 2010 under the Striving Readers Comprehensive Literacy (SRCL) project to develop a state literacy plan that would address the literacy needs of children from birth to grade 12.

2011 (May) [HB 1181](#) - Requires local school divisions to provide reading intervention services to students in grade three who demonstrate deficiencies based on their individual performance on the Standards of Learning reading test or any reading diagnostic test that meets criteria established by the Department of Education. The local school division, at its discretion, shall provide such intervention before promotion to grade four.
http://www.doe.virginia.gov/instruction/english/elementary/reading/early_intervention_reading.shtml

2011 (October 18) [Decoding Dyslexia New Jersey](#) (DDNJ), a grassroots organization in New Jersey, was established

2011 (November) Joint Legislative Audit and Review Commission (JLARC) - report to the Governor and General Assembly, [Strategies to Promote Third Grade Reading Performance in Virginia](#)

2012 [Congressional Dyslexia Caucus](#) established by Senators Cassidy and Stark.

2013 (February) – [Decoding Dyslexia Virginia](#), a grassroots organization in Virginia, was established

2013 (March) [HB 2068](#) – Adds kindergarten and grades one and two to the requirement that local school divisions provide early intervention services to students in grade three who demonstrate deficiencies based on their individual performance on diagnostic reading tests.

2013 (Summer and Fall) VDOE sponsored Language Essentials for Teachers of Reading and Spelling (LETRS) Training - Modules 1 and 3; the Virginia Branch of the International Dyslexia Association sponsored Module 2 to coincide with the VDOE trainings

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2014 [Virginia's Guidelines for Educating Students with Specific Learning Disabilities](#) published (revised February 2017)

2014 – VDOE sponsored Multisensory Reading Instruction Symposium with Martie Torza Simmons, Orton Fellow

2015 [Connecticut Longitudinal Study](#) – this study was used within the LETRS Module One discusses the study results as of 1997 (published within B. Blachman (Ed.), *Foundations of reading acquisition and dyslexia: Implications for early intervention*) to discuss the link between decoding and reading comprehension and that the correlation between these two components of reading changed as student learned to read (from one grade to another); in November 2015 published with further information, *Achievement gap in reading is present as early as first grade and persist through adolescence*, in the Journal of Pediatrics (November 2017) - researchers have found that academic gaps related to dyslexia can show up years before children traditionally are expected to read.

2015, 2016, 2017 – VDOE sponsored [Multisensory Structured Language Instruction Trainings](#) with Dawn Nieman, Orton Fellow (MSLIPP I, II, III, IV, TA1, and TA2)

2015 (October) [Dear Colleagues Letter](#) regarding the inclusion of dyslexia, dysgraphia, and dyscalculia discussion within an Individual Education Programs (IEPs) from the Office of Special Education and Rehabilitative Services (OSERS); *“Therefore, if a child’s dyslexia, dyscalculia, or dysgraphia is the condition that forms the basis for the determination that a child has a specific learning disability, OSERS believes that there could be situations where an IEP Team could determine that personnel responsible for IEP implementation would need to know about the condition underlying the child’s disability (e.g., that a child has a weakness in decoding skills as a result of the child’s dyslexia).”*

2015 (December) [Every Student Succeeds Act](#) (ESSA) – reauthorization of ESEA; consistent with section 8302(b)(1) of ESEA, as amended by ESSA, the Department collaborated with State educational agencies (SEAs), as well as other State and local stakeholders, to develop the revised template. The revised template includes only those descriptions and information that the Secretary has determined are absolutely necessary for the Department’s full consideration of each State’s consolidated plan.

ESSA created the [National Center on Improving Literacy](#) (NCIL) to improve literacy outcomes for students with literacy related disabilities including dyslexia.

ESSA authorized a new program called Literacy Education for All, Results for the Nation, or LEARN, aimed at improving achievement in reading and writing. LEARN authorizes the secretary of education to give grants to states for evidence-based literacy instruction in high-need schools. The U.S. Department of Education's Institute of Education Sciences will conduct a national evaluation of those programs, though the details on what "evidence-based" means and how the programs will be evaluated remain unclear.

<http://www.edweek.org/ew/articles/2016/01/06/essa-reins-in-reshapes-federal-role-in.html>

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2015 The Virginia Parent Teacher Association adopted a [resolution](#) asserting dyslexia awareness work as a priority for the organization.

2016 [HR 3033](#) Research Excellence and Advancements for Dyslexia Act (READ Act); (Sec. 3) This bill requires the National Science Foundation (NSF) to include in its annual congressional budget justification for the amount requested for its Research in Disabilities Education program, which advances the goal of broadening the participation and achievement of learners with disabilities in science, technology, engineering, and mathematics. (Sec. 4) Subject to the availability of appropriations, NSF must devote specified funding to support research on learning disabilities, including dyslexia, with the goal of practical application.

2016 (April) [HB 842](#) - requires the Virginia Board of Education regulations governing teacher licensure to require every person seeking initial licensure or renewal of a license to complete [dyslexia awareness training](#), provided by the Department of Education, on the indicators of dyslexia and the evidence-based interventions and accommodations for dyslexia. The bill requires the Department of Education to collaborate with the State Council of Higher Education for Virginia to ensure that all teacher preparation programs offered at public institutions of higher education in the Commonwealth or otherwise available convey information on the identification of students at risk for learning disabilities, including dyslexia, other language-based learning disabilities, and attention deficit disorder.

2016 (September) [Office of Civil Rights \(OCR\) determination](#) on state testing accommodations for a student with dyslexia – the decision from OCR directed Alabama to rewrite its policy on accommodations for high stakes testing; an important point also from this decision is that students much practice the testing accommodations considered appropriate for the student on a regular basis.

2017 (February) [Dyslexia Frequently Asked Questions](#)- VDOE publication, as a companion document to the Virginia’s Guidelines for Educating Students with Specific Learning Disabilities

2017 (March) [Dyslexia Awareness Modules](#)- published by VDOE development in compliance with HB 842

2017 (March) [SB 1516](#) - requires one reading specialist employed by each local school board that employs a reading specialist to have training in the identification of and the appropriate interventions, accommodations, and teaching techniques for students with dyslexia or a related disorder and to have an understanding of the definition of dyslexia and a working knowledge of several topics relating to dyslexia. This bill is identical to [HB 2395](#).

As of September 2017, **42 states have adopted legislation related to dyslexia** or added through school board adoption to their administrative code - <http://www.dyslexicadvantage.org/dyslexia-laws-2017/>. According to [Dyslegia](#), 31 bills were introduced in 2017 in 18 states and the District of Columbia.

Access to the Podcast, Hard to Read: How American Schools Fail Kids with Dyslexia - <https://www.apmreports.org/story/2017/09/11/hard-to-read>.

Neuro-imaging Research into the Impact of Dyslexia

Functional Magnetic Resonance Imaging (fMRI), which measures brain activation by tracking the brain's blood flow and volume while performing a cognitive task (Cox, 1996), can be a possible tool in identifying potential neurobiological abnormalities in individuals with dyslexia. It allows for a biological analysis of the brain that is imperative in the search for an objective diagnosis of dyslexia (Shapiro, 1999).

There is significant evidence, generated by fMRI, that there are neural differences in individuals with dyslexia as compared to typically developing readers. For example, individuals with dyslexia were found to share abnormalities in the left hemisphere temporo-parietal regions, which are involved in phonological processing, and left hemisphere occipito-temporal region, which plays a part in word recognition (Peterson & Pennington, 2012). Additionally, adults with dyslexia showed less or no activation in the posterior superior temporal gyrus (pSTG), which is also involved in phonological processing (Karni et al., 2005).

Furthermore, previous Magnetic Resonance Imaging (MRI) research in the field of dyslexia has pointed at a right lateralized activation in individuals with dyslexia (Shaywitz et al., 1998). Shaywitz et al. studied 16-54 year old individuals with dyslexia and 18-63 year old typical readers who were given a non-word rhyming task. In this task the participant was required to decide whether 2 non-words rhymed or not, which involves a complex phonologic decoding. Data suggested that typical readers showed greater activation in the left inferior and middle temporal gyri and the occipital gyrus, whereas individuals with dyslexia showed greater activation in these regions in the right hemisphere (Shaywitz et al., 1998).

<http://www.jyi.org/issue/an-fmri-study-of-a-dyslexia-biomarker/>

Dyslexia and the Brain, an IDA Fact Sheet written by Guinevere Eden, Ph.D., explains the complexity and history of neuro-imaging research on dyslexia over the last 25 years.

<https://dyslexiaida.org/dyslexia-and-the-brain-fact-sheet/>.

Richards and Berninger (2008) found, through fMRI study, that the children with dyslexia, who had participated in a three-week instructional program that provided explicit instruction in linguistic awareness, alphabetic principle (taught in a way to maximize temporal contiguity of grapheme-phoneme associations), decoding and spelling, and a writers' workshop, did not differ from the children without dyslexia in any of the clusters in the group difference map identifying differences between dyslexics and good readers, showing that functional connectivity (and not just regions of interest) may normalize following instructional treatment. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2597820/>

Leading researchers include Guinevere Eden, Ken Pugh, John Gabrieli, Albert Galaburda, Stanilas DeHaene, and Sally and Bennett Shaywitz.

References (not clarified within the text)

Each link will direct the reader to a site explaining the item in greater detail.

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