**Appendix A**

Table 1. Summary of the 41 most popular remediation/support programs for struggling readers (e.g. dyslexics, ELLs). The programs containing NLB elements associated with LB tasks are marked with a star.

|  |  |  |  |
| --- | --- | --- | --- |
| **Name of Program** | **Authors** | **Essential skills targeted** | **Literature** |
| **Orton Gillingham** | Orton S., and Gillingham, A.★ | Systematic, sequential, **multisensory**, synthetic and phonics-based approach to teaching reading. Explicit instruction in phonology and phonological awareness, sound-symbol correspondence, syllables, morphology, syntax, and semantics. **Multisensory**, involving **visual**, auditory, and **kinesthetic/tactile** learning pathways, often referred to as the *Language Triangle*.  | Ritchey, K. D., & Goeke, J. L. (2006). Orton-Gillingham and Orton-Gillingham—based reading instruction: A review of the literature. *The Journal of Special Education*, *40*(3), 171-183.*12 studies: 5 reported OG instruction to be more effective than comparison interventions for all measured outcomes, 4 reported OG to be more effective for at least 1 (but not all) outcomes in comparison to other intervention(s), 2 reported that the alternate instruction was more effective than the OG instruction, and 1 reported no significant differences once covariates were included. Given the small number of studies, the lack of methodological rigor of the existing studies, and the inconclusive findings of the effectiveness of OG programs, additional research is needed before the scientific basis can be established.* |
| **Corrective Reading** | Johnson G. and Engleman Z. (SRA/McGraw-Hill)★ | Evaluating Oral and Silent Reading, the cloze procedure, reversals, reading levels, general alertness, and personality inventories, **visual** motor exercises Additional support for language uniqueness in black children and linguistics. | Engelmann, S., Hanner, S., & Johnson, G. (2007). *Corrective reading: Series guide*. McGraw-Hill College.Przychodzin-Havis, A. M., Marchand-Martella, N. E., Martella, R. C., Miller, D. A., Warner, L., Leonard, B., & Chapman, S. (2005). An Analysis of" Corrective Reading" Research. *Journal of Direct Instruction*, *5*(1), 37-65. *Reported efficient in meta-analysis of 28 papers.* |
| **Lindamood-Bell programs** | Lindamood P. & Lindamood P., and Bell N.★ | * Sounding out words, Word reading
* Paragraph reading, Reading comprehension, Oral language comprehension, Spelling, Vocabulary
* **Math,** Following directions
 | Sadoski, M., & Willson, V. L. (2006). Effects of a theoretically based large-scale reading intervention in a multicultural urban school district. American Educational Research Journal, 43(1), 137-154.Statistically significant and increasing gains favoring the Lindamood-Bell reading intervention were found both overall and in analyses of Title 1 schools. |
| **Wilson Reading System****1996** | Wilson B. (Wilson Language Training)★ | Explicit, direct, cumulative, intensive, and focused instruction on the structure of language; **Multisensory** and interactive. learning using visual, auditory, and kinesthetic-tactile pathways to enhance memory and learning of written language. Decoding, morphology and the study of word elements, encoding and orthography (internalizing the rules that govern English), high frequency word instruction, oral reading fluency, vocabulary, and comprehension. Teaching total word structure for reading and spelling. Sound tapping system to help students segment and blend sounds. Scooping sentences and passages into meaningful phrases in order to read with prosody. Manipulation of sound, syllable, and word element (prefix, base element, and suffix) cards. Collections of controlled and readable text (wordlists, sentences, stories) | Wilson, B. (1996). *Instructor Manual (Wilson Reading System)*. Oxford, MA: Wilson Language Training Corporation. |
| **AfterSchool KidzLit** | ★ | Alphabetic Phonics. Children hear fiction and nonfiction books read aloud or read books independently and make connections between the stories and their own lives. Express their feelings and explore big ideas through discussion, drama, **art, movement**, and writing. Supports of social & emotional development. Use new words, identify and discuss big ideas, make predictions about text, keep journals, **draw pictures** and talk before writing, record their ideas. brainstorming, **visualizing**, **group charting, mind mapping**, partner reading, chatting with buddies, pantomiming, incorporating music. |  |
| **Concept-Oriented Reading Instruction** | ★ | Extended, engaged reading in the classroom for 60 minutes daily[**Reading and Science Integration**](http://www.cori.umd.edu/what-is-cori/program-goals/integration.php)* **Relating observations in "hands-on" science activities to contents and characters in literary and information books**.
* Connecting students' interests in the environment to their motivations for book reading.

**Student Writing*** Writing entries in portfolios: Information text reading, literary text reading, science concepts, science processes, motivation for reading.
 |  |
| **Learning Upgrade** | ★ | Online learning: reading literature, informational text, Writing, listening, phonics & decoding, grammar, **math (measurement, geometry, numbers, operations, algebraic thinking)**, music. Immediate feedback through voice, text, animations. 30-60min/day, students’ own pace. | <https://web.learningupgrade.com/about/> |
| **Saxon Phonics Intervention** | [Houghton Mifflin Harcourt](https://www.hmhco.com/shop/education-curriculum/intervention/reading/soar-to-success-reading)★ | kits: Cards, pamphlets, images, practice sheets, **connection words/shapes and images**  | <https://www.classroomresourcecenter.com/shop-by-brand/saxon-phonics/?gclid=Cj0KCQiA5NPjBRDDARIsAM9X1GIMw28N5AkO4EVHbWHRamWarRpoGZjyh6sGQe3l6y8ugq2DcRljxjcaAilaEALw_wcB><https://www.classroomresourcecenter.com/content/saxonphonicsandspellingoverviewbrochure.pdf>*Success information:* [*https://www.classroomresourcecenter.com/content/saxonphonicsandspellingresearchpedagogymatrix.pdf*](https://www.classroomresourcecenter.com/content/saxonphonicsandspellingresearchpedagogymatrix.pdf) |
| **Failure Free Reading Program** | Joseph Lockavitch | (a) Previewing stories, (b) listening while being read, (c) presenting story content, (d) reading story, and (e) reviewing story.  | Rankhorn, B., England, G., Collins, S. M., Lockavitch, J. F., & Algozzine, B. (1998). Effects of the failure free reading program on students with severe reading disabilities. *Journal of Learning Disabilities*, *31*(3), 307-312.*Improved performance in letter-word identification, word attack, comprehension, and dictation after intensive intervention. Discrepancies between intellectual ability and reading achievement decreased in more than half of the students.* |
| **PALS Reading** | Fuchs D. Fuchs L.(Vanderbilt Kennedy Center for RHD) | Word recognition, fluency, reading comprehension in peer-reading. | Fuchs, D., Fuchs, L. S., & Burish, P. (2000). Peer-assisted learning strategies: An evidence-based practice to promote reading achievement. *Learning Disabilities Research & Practice*, *15*(2), 85-91. |
| **Academy of Reading** |  | Intensive and comprehensive web-based Tier II and Tier III intervention tool focused on strengthening the root skills of reading. Explicit Systematic and direct Instruction –conducted in five key pillars recognized by the National Reading Panel: Phonemic Awareness, Phonics, Fluency,Vocabulary and Comprehension Positive Feedback. Grades 2 through high school. 20-30 minutes per session, three to five days a week. | Fiedorowicz, C. A. M, & Trites, R.L. (1987). An evaluation of the effectiveness of computer-assisted component reading subskills training. Education and Technology Series.<https://charts.intensiveintervention.org/chart/academic-intervention-chart/13634>*Students made significant gains in reading word recognition, phonetic skills, and paragraph reading.*  |
| **Accelerated Reader** | Developed by[Renaissance Learning](https://en.wikipedia.org/wiki/Renaissance_Learning), Inc. | For [K-12](https://en.wikipedia.org/wiki/K-12_school)* Assessment of reading level through the STAR
* Leveling trade books using the ATOS reading formula (average sentence length, average word length, vocabulary grade level, number of words in the book)
* Student reading reporting, [comprehension](https://en.wikipedia.org/wiki/Reading_comprehension), amount of reading, [diagnostic](https://en.wikipedia.org/wiki/Diagnostic) information, and other variables.
 | *Holmes and Brown found that two schools using the School Renaissance program achieved statistically significant higher standardized test scores**Educators have argued that the use of Accelerated Reader does not teach reading for comprehension; it only teaches reading for recall.* |
| **Achieve3000** |  | Achieve3000’s *Pro* literacy solutions (KidBizPro® for grades 2-5, TeenBizPro® for grades 6-8, and EmpowerPro® for grades 9-12). Student in class read the same but grade-appropriate content differentiated with differentiated instruction, an adaptive content integrating ongoing assessment with engaging nonfiction content, scaffolds, and linguistic supports. | <https://www.achieve3000.com/learning-solutions>Exceeded their expected Lexile® reading growth by an average of 174 points, attaining over 3X the growth that was expected. |
| **Achieving****Maximum Potential Reading System** |  | Barton Reading & Spelling System |  |
| **America's Choice--Ramp-Up Literacy** | Pearson | Engaging Striving Readers in Academic Literacy * Workshop model for students’ ideas exchange + individual & small-group instruction, Scaffold instruction, Use of appealing, diverse reading materials, regular opportunities to

choose their own reading materials Teaching Comprehension and Writing Explicitly * Model comprehension skills and provide direct guidance in using them, Provide intensive, systematic writing instruction
 | Fiedorowicz, C. A. M., & Trites, R. L. (1987). *An Evaluation of the Effectiveness of Computer-Assisted Component Reading Subskills Training. Education and Technology Series*. MGS Publication Services, 880 Bay St., 5th Floor, Toronto, Ontario, Canada M7A 1N8. |
| **Benchmark Word Detectives** |  | Strategy instruction teaching students to use known words to decode unknown words, use context as a check for making sense, chunk words into meaningful units, and to be flexible in applying known word parts. |  |
| **Corrective Reading** |  | Promote reading accuracy (decoding), fluency, and comprehension for grade 3 or higher who are readingbelow grade level. Alphabetics, Comprehension, Reading fluency.  | Gregory, R. P., Hackney, C., & Gregory, N. M. (1982). Corrective reading program: An evaluation. *British Journal of Educational psychology*, *52*(1), 33-50. |
| **Failure Free Reading** |  | Teacher previews vocabulary, models reading, teaches comprehension using factual, inferential and leading questions• Diagnostic/Prescriptive assessment (placement & exit)• Pre/post tests for each story• Pre-teaching lesson for each lesson• Talking book instruction each lesson• Word Recognition activity each lesson• Reinforcement Activities: spelling practice• Reading Comprehension Quiz• Snapshot, Detailed & Diagnostic progress monitoring Reports• Directions, pronunciations provided in English, Spanish, and ALSFill in the blank, complete sentence, alphabetical order, sentence scramble, sentence illustration, word illustration, word search, and written response.  | *Based on Dr. Lockavitch’s research*  |
| **Junior Great Books** |  | Combines high-quality literature, student-centered discussion, and activities that support reading comprehension, critical thinking, speaking and listening, and writing.Access their content online, Interact with classmates, Share questions and annotations, Respond to classmates’ questions and teacher feedback |  |
| **Knowledge Box** |  | Based on learning styles, enhance interest and retention, use of psychological techniques such as strategic color use. Children create small booklets along the way and put them all together at the end of the study to create a keepsake called a Lapbook. |  |
| **My Reading Coach** |  | Content based on Orton-Gillingham (OG) methodology: Phonemic awareness, phonics (sound letter association), vocabulary, grammar, comprehension, fluency. Virtual reading coaches, intensified instruction for struggling readers. patented Synthetic Intelligence™ | The Effects of an ICT-Based Reading Intervention on Students’ Achievement in Grade Two. D. Schneider A. Chambers N. Mather, R. Bauschatz, M.Bauer L. DoanindPlay Virtual Reading Coach: Initial Research Study Summer, 2013 Researchers: A.W. Chambers, N. Mather, K. Stoll  |
| **Peer-Assisted Learning Strategies PALS** | Lynn and Doug Fuchs in 1997 | Kindergarten, grade 1, grades 2–6, and high school. Peer-tutoring instructional program supplementing the primary reading curriculum, Pairs of students work together on reading activities to improve reading accuracy, fluency, and comprehension. Students alternately take on the roles of tutor and tutee. Read aloud, listen to partner read, and provide feedback during various structured activities. Passage reading with partners, paragraph “shrinking” (main ideas), prediction relay (predicting what will happen next).  | U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2012, January). Adolescent Literacy intervention report: Peer-Assisted Learning Strategies. Retrieved from http://whatworks.ed.gov. *When MindPlay’s Virtual Reading Coach was used for an average of 10 hours, students increased their grade level nearly five times, from 9 to 44 percent. Students gained nearly half a grade level in just 10 hours of usage, recording a .45 grade level gain.* |
| **Phono-graphix** | Carmen and Geoffrey McGuinness1996, | Presenting pictures and words together as associated with sounding.Concept 1 - Letters are pictures of soundsConcept 2 - Sound pictures can be represented with more than one letterConcept 3 - There is variation in the codeConcept 4 - There is overlap in the codeThe Skills Needed to Use Such a Code: 1. Segmenting, 2. Blending, 3. Phoneme Manipulation | The [*Orton Annals of Dyslexia*](https://www.phono-graphix.com/pdfs/research/OrtonAnnals.pdf) (the research journal of the *International Dyslexia Society*)https://www.phono-graphix.com/about\_the\_method.php |
| **Edmentum (former PLATO Learning)** |  | Comprehensive all encompassing online curriculum with visuals, colors, and user friendly/fun/rewarding interfaces. (must enroll to see details) |  |
| **Project CRISS** |  | Empower learners to be engaged, metacognitive, and strategic.Engaged/interactive teaching | http://www.projectcriss.com |
| **Questioning the Author** |  | Q&A strategy encouraging students to ask questions about author & the text.  | Beck, I.L., & McKeown, M.G., Hamilton, R.L., & Kugan, L. (1997). *Questioning the author: An approach for enhancing student engagement with text*. Newark, DE: International Reading Association. |
| **READ 180** |  | Interactive, colorful, multi tool interactive instruction online. | https://www.hmhco.com/products/read-180/view-component.php |
| **READ RIGHT** | Dr. Dee Tadlock | Research based procedures involving: Using Anticipatory Sets, multiculturality, Using Back-Propagation, Examining Neural Activation Patterns Associated with Word Identification and with Reading Connected Text, Constructivist Theory and Implicit Procedural Learning, Children Teach Themselves to Read through Implicit Processes, based on Brain Plasticity |  |
| **Reading Apprenticeship** | R.Schoenbach,C. Greenleaf, L. Murphy | Disciplinary-specific literacy skills, students build high-level comprehension strategies, engage in building knowledge by making connections to background knowledge they already have, and ample guided, collaborative, and individual practice. Metacognitive Conversation Social, Personal, Cognitive, and Knowledge-Building. | Book: Reading for Understanding: How Reading Apprenticeship Improves Disciplinary Learning in Secondary and College Classrooms Ruth Schoenbach, Cynthia Greenleaf, Lynn Murphy  |
| **Reading Power in the Content Areas** | Carol Burgess | **Instructional Strategies:** Vocabulary—Direct instruction & reinforcement Comprehension/thinking skills—Critical reading, main idea, detail, pre-reading, brainstorming, active (vs. passive) reading. Related language skills—Content oriented, related reading/writing/speaking/listeningStudy skills—Location, selection, organization, reading rate**Assessment**Materials—Readability/usability (manual/computer), Student—Standardized/teacher-developed/portfolio, Instructor—Attitude/behavior/change | <http://readingpowerincontentareas.org/Overview.html> |
| **REWARDS** |  | Increase student fluency, vocabulary knowledge, and comprehension skillsIncrease student success in content-area classes. Provide students practice with the types of questions asked on state tests. | <https://www.voyagersopris.com/literacy/rewards/overview> |
| **Scaffolded Reading Experience** |  | Flexible activity that can be implemented before, during, or after reading to provide students a means of guidance in comprehending, learning, and enjoying literature. | <https://readingstrategiesandpracticesunit1.weebly.com/scaffolded-reading-experience.html><http://www.aminlimpo.com/2016/12/scaffolded-reading-experience-sre.html> |
| **Soar to Success** | [Houghton Mifflin Harcourt](https://www.hmhco.com/shop/education-curriculum/intervention/reading/soar-to-success-reading) | Kits with books and cards. Research-based reading intervention program for students grades 3-8 who are reading significantly below grade level. Small-group model using motivating literature, reciprocal teaching, and graphic organizers in fast-paced lessons to help accelerate reading growth. | <https://www.eduplace.com/intervention/soar06/prod_overview/index.html> |
| **Spell Read P.A.T.** |  | Multi-sensory approach building students’ sound system and bridging it with students’ oral language to build automaticity. Combines intensive phonemic and phonetic activities with leveled readers and trade books to build reading comprehension. One-year, small-group reading intervention Research-based designed for students who are more than two years behind grade level, students with learning differences, and ELLs Focus on phonological automaticity & reading fluency, comprehension, vocabulary and opportunities for writing. Daily instructional cycle includes:Linguistic Foundations, Active Reading, Writing Connections. | <https://www.enablemart.com/spellread> |
| **Strategic Instruction Model** |  | Gradually release of control from teacher to student to help students understand information and solve problems effectively.  Booklets and activities to implement routinely. | <https://sim.drupal.ku.edu/sim-curricula> |
| **Thinking Reader** | D. Rose & B. DaltonCenter for Applied Special Technology (CAST) | Computerized books. Program reads the book while the text is highlighted. Difficult vocabulary is underlined, and a click brings up a sounded definition. At various points throughout the story, a message says “This is a good place to stop and think about the story.” **Step 1:** Modeling Strategic Reading. **Step 2:** Building Reading Comprehension Skills. **Step 3:** Assessing & Evaluating Student Progress.**Step 4:** Engaging Students in a Discussion of the Literature and Strategies. **Step 5:** Extending the Strategies. | Designed using Section 508 guidelines for universal accessibility, including adjustable font size, keyboard navigation, text captioning, screen reader compatibility, and text-to-speech.Thinking Reader is aligned to state and national standards and supports the principles of No Child Left Behind (NCLB).<http://www.tcnj.edu/~technj/2005/thinkingreader.htm> |
| **Transactional Strategies Instruction** | Michael Pressley | Modeling use of comprehension strategies to demonstrate when and how to apply the strategies in different problem-solving situations. Questioning, Summarization, Prediction, Visualization, Activation and use of prior knowledge, Use of story grammar (fictional texts), Use of text structures (informational texts), Thinking aloud, Understanding when comprehension breaks down, Personal responses to texts, Connections | Brown, R., Pressley, M., Van Meter, P., & Schuder, T. (1996). A quasi-experimental validation of transactional strategies instruction with low-achieving second-grade readers. *Journal of Educational Psychology, 88(1)*, 18-37.<http://assist.educ.msu.edu/ASSIST/classroom/teaches_content/ES_lang_arts/transstratinstr.html> |
| **Vocabulary Improvement Program** |  | The *VIP for ELL and Their Classmates* is a vocabulary development curriculum for grades 4–6. It’s15-week program with 30–45 minute whole class and small group activities, aims to increase students’ understanding of target vocabulary included in a weekly reading assignment. Mondays: weekly text to preview in Spanish. Tuesdays: text introduced in English, and target words discussed. Wednesdays: heterogeneous groups (based on English language proficiency) and completion of two types of cloze activities. Thursdays: engaging in word association, synonym/antonym, and semantic feature analysis tasks. Fridays: analysis of root words and derivation, or knowledge of multiple meanings. | D. August, M.S. Carlo, B.McLaughlin, and C.Snow, published by Brookes Publishing. Baltimore. <http://www.brookespublishing.com/store/books/lively-6342/index.htm> |
| **Voyager Time Warp Plus** |  | **K–9** summer reading intervention system for struggling readers. 3–4 hours of academic learning per day for 3–6 weeks, (80 hours)Theme-based adventures beginning the day with instructional-level text to practice reading fluency. Practice improving reading rate or pace, reading accuracy, and prosody. Begin the day sharing read-aloud to build oral vocabulary and listening comprehension. Teacher-led lessons in word study, including sight words, spelling, passage reading and strategies for building vocabulary and comprehension, fluency practice.  | <https://www.voyagersopris.com/literacy/timewarp-plus/overview><https://www.voyagersopris.com/docs/default-source/literacy/timewarp-plus/timewarp-plus-research-foundations-and-design.pdf?sfvrsn=4e8ea5cb_2> |
| **Wilson Reading System** |  | Intensive Tier 3 program for students in grades 2-12 and adults who are not making sufficient progress with current intervention; are unable to learn with other teaching strategies & require multisensory language instruction; or require intensive structured literacy instruction due to a language-based learning disability, such as dyslexia.* Word structure, for automatic decoding and spelling, Word recognition & spelling of high frequency words, including irregular words, Vocabulary, word understanding, and word-learning skills, Sentence-level text reading with ease, expression, and understanding, Listening comprehension with age-appropriate narrative and informational text, Reading comprehension with narrative & expository text of increasing levels of difficulty, Narrative & informational text structures, Organization of information for oral or written expression, Proofreading skills, Self-monitoring for word recognition accuracy & comprehension.
 | <https://www.wilsonlanguage.com/programs/wilson-reading-system/> |
| **Write To Learn** |  | Innovative web-based program instantly assesses student work by evaluating the meaning of text, along grammar and spelling. Essay practice and summary writing skills to expand vocabulary. Personalized feedback, hints, and tips to encourage, instruct, and reward their progress. | <https://www.writetolearn.net> |