

The Hidden Push for Phonics Legislation

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Across the nation state legislators have been responding to an initiative by an organization known as Decoding Dyslexia. The goal of this organization's initiative is to create and support state chapters of Decoding Dyslexia in a quest to mandate rules and regulations concerning the preparation and certification of teachers who work with 'dyslexic' students. The Decoding Dyslexia (DD) website (www.decodingdyslexia.net/info.html) argues for enhanced emphasis on developing all teachers' awareness of dyslexia and also argues for presenting teachers with a single (non-existent) definition of dyslexia and mandatory remediation for dyslexic students.

Decoding Dyslexia is a "network of parent-led grassroots movements across the country concerned with the limited access to educational interventions for dyslexia within the public education system." This "parent-led" organization now has chapters in all 50 states plus several Canadian provinces (visit their website for Tennessee at www.DecodingDyslexiaTN.org). On the website of Decoding Dyslexia – Tennessee, you will see lots of photos of members in action at conferences and meeting with state legislators. There are also numerous photos of many with children wearing bright

red sweatshirts emblazoned with Dyslexia Untie (www.dyslexia-untie.com). Dyslexia Untie is a mother's website promoting the Say Dyslexia law. In addition, you will find hotlinks to other dyslexia instruction-themed websites.

The website of the Tennessee chapter of Decoding Dyslexia also promotes awareness of the Say Dyslexia bill that became Tennessee education law in 2016. That bill was promoted by the group and now sets forth the legal basis for advocating for additional legislation that would establish a legal definition of dyslexia as well as early screening for dyslexia and mandates for dyslexic children's access to "dyslexia remediation" and "assistive technologies" in schools for use by and with dyslexic students. You can read the legislation and note the requirements that schools provide all dyslexic children with "multi-sensory dyslexic-specific reading instruction".

You can read the Say Dyslexia law now in place in Tennessee (<https://dyslexia-untied.com>). The law sets up a state Dyslexia Advisory Council of 9 members which must meet quarterly. Members of the committee include one member from a dyslexia advocacy group, a special education teacher with an understanding of dyslexia, a speech pathologist, three general

education teachers, a parent of a dyslexic child and several members of the state education agency. This committee is required to submit an annual report to both the House and the Senate. What I find most disturbing about the recent Tennessee dyslexia law is the absence of any input from the Literacy Association of Tennessee (LAT) as well as the absence of members of the Dyslexia Advisory Council drawn from the membership of LAT.

Throughout the on-line information available from Decoding Dyslexia you will find assertions that “one of every four (or five) children is dyslexic”. That would mean that every third-grade classroom in Tennessee would have four or five “dyslexic” students! But the truth of the matter is quite different. The key characteristic of “dyslexic” children that virtually everyone agrees upon is that “dyslexic” children are extraordinarily difficult to teach to read successfully. Of course, for me and many others, no child could be identified as “dyslexic” unless they have had access to high-quality reading lessons both in their classroom and in whatever remedial reading program they participate in (Title 1, special education, English as a Second Language, etc.) and yet still have shown limited progress in their reading development (Pressley & Allington, 2014). Unfortunately, access to high-quality classroom and special program reading instruction

is rarely experienced today by children considered “dyslexic”, thus as it now stands, I argue that there are no “dyslexic” children. I argue that because there are literally no struggling readers (including those labeled dyslexic) receiving both high-quality classroom and special program reading instruction. The real conundrum for “dyslexia” advocates, however, is found in a book and an article by Rosalie Fink (1998; 2006). After interviewing 66 adults who had been labeled as “dyslexic”, Fink interviewed these adults about their schooling and how it was that they had become proficient readers. That is, 27 of these “dyslexic” individuals had earned an advanced degree (17 PhD, 6 MD and 4 JD) and 65 of the 66 “dyslexics” had earned at least a four-year degree (BS, MS, BFA, etc.). However, each of these “dyslexic” individuals “had failed to respond to validated interventions in reading” during their first years in school (p. 146), but between ages 10 and 13 they developed fluency in reading and became avid readers. Fink (2006) also notes that the success of these readers argues for a focus on silent reading because none found oral reading comfortable or rewarding. Two thirds of these individuals never mastered spelling, and one third of them did not master other phonological decoding skills, yet they all became skilled readers --scoring at the highest levels in

silent reading comprehension and vocabulary (Fink, 2006, p. 137). Central to her model for teaching “dyslexic” students is that reading instruction must focus more on each student’s interests, working towards a goal of fostering a deep knowledge in one or more areas for each struggling reader. This focus on each child’s passionate interest works to develop deep knowledge on one or more topics. This deep knowledge then facilitates using that expertise as a sort of “scaffolding” when reading. Ultimately, this focus on passionate interests supported the vocabulary development and comprehension of these “dyslexic” readers. Fink (2006) concludes that in designing reading instruction for children who have failed to learn to read by age 10, “the power of a reader’s passionate, personal interests cannot be overstated” (p. 136). Fink’s argument for a very different approach in developing the reading proficiency of students who are difficult to teach (or “dyslexic”) should serve to remind all of us that children differ and that there exist multiple ways that children learn to read. The problems struggling readers present is not likely to ever go away but intervening with very code-focused, multi-sensory lessons, as DD and IDA suggest, has no research support and has had little, if any, success after an almost 100-year trial and that alone should stimulate the search for effective methods for developing the reading proficiencies

of struggling readers.

The actual problem, then, presented by most struggling readers (including children identified as “dyslexic” students) is that there is little evidence the struggling readers get any appropriate reading instruction. The classroom where they would be expected to receive at least 90 minutes daily of high-quality reading instruction rarely provides struggling readers either 90 minutes of classroom reading instruction or any minutes of high-quality reading instruction (Allington & McGill-Franzen, 1989a, Vaughn, Moody & Schumm, 1998). In these observational studies, equal numbers of children enrolled in either Title 1 or special education programs were observed across whole school days. These students were drawn from low-income families and enrolled in schools in multiple school districts. Neither study found that either group of struggling readers actually received more minutes of either reading instruction or more minutes of reading activity than did other students. In fact, the usual case was that struggling readers in these two supplementary programs received far less reading instruction every day than did their classmates who had developed on-level reading proficiencies. Central to this problem was that for both programs the time that Title 1 and special education students received their ‘special’

reading services was almost always scheduled during the same time as was classroom reading instruction. However, federal legislation governing these program designs includes a 'supplement and do not supplant' clause concerning special program and classroom reading lessons. That is, federal rules were designed to increase the amount of reading instruction that struggling readers received. It would always be greater than the amount of reading instruction other students receive. Since participating in the remediation programs available in either Title 1 or special education classes typically involves moving to another classroom and to a different teacher, the transition time to move to a different location and once again participate in a reading lesson simply ate up minutes that could have been available for instruction (Allington, 2010). In addition, in too many cases pupils with disabilities only participated in reading instruction in the special education site (and many students went to their special education site but were then never exposed to any high-quality reading instruction).

Unfortunately, Allington & McGill-Franzen, 1989b, Vaughn and Linan-Thompson (2003), Vaughn, Moody and Schumm (1998), Croninger and Valli (2009) and Valli-Croninger and Buese (2012) reported the situation described above such that it almost seems to be the 'normal' routine that

struggling readers experience in American schools. In far too many cases the special education teacher has received no, or very minimal, preparation in teaching children to read. Then there are the paraprofessionals who often are charged with delivering the reading instruction in both remedial and special education programs. Of course, most paraprofessional have received no preparation in teaching children to read. This is the sad state of affairs for struggling readers in most schools – the most instructional needy children are getting fewer minutes of reading instruction than other students and what reading instruction they do receive is of significantly lower quality than the reading instruction offered other students by their classroom teachers. The current reading instruction that struggling readers receive is a huge problem and a cause for concern. It is the academically struggling students who must receive both the highest quality instruction as well as the greatest amount of reading instruction if we hope to create literate individuals. Thus, we must ask what are the defining features of high-quality reading instruction?

Characteristics of high-quality reading instruction

Space precludes a full description of high-quality reading instruction. That is because there are multiple book-length treatises on high-quality reading instruction and all are much longer than this article. Thus, I will focus on four research-based features that are absolutely essential aspects of high-quality reading instruction.

The first key element of high-quality reading instruction is simply sufficient time is allocated such that all children receive at least 90 minutes of high-quality reading instruction every day (Bloom, 1974, Kiesling, 1978). Students who have been unable to attain grade level achievement need more and better reading instruction. Let's say that 120 minutes of daily high-quality reading lessons would be sufficient for struggling readers to attain on-grade-level reading proficiency. Since most of these children participate in Title 1 remedial education or special education reading instruction besides the 90-minute daily classroom reading lesson it would be possible to provide them with 120 minutes of daily reading lessons. This model follows the general federal guidelines for Title 1 remedial students and special education students—that is, federal program dollars purchase additional instructional time. It will also require that supplemental reading instruction, such as that provided in the two program types noted above, be provided 30-45 minutes outside the classroom reading

instructional period. Thus, all children having difficulty acquiring reading proficiency would be expected to participate in both a 90-minute classroom reading lesson and 30-45-minute supplementary reading lesson outside the classroom.

But it takes more than just minutes of reading lessons to produce high levels of reading achievement. High-quality reading instruction requires that children are engaged in actual reading activity from 60 to 75 minutes daily – or roughly two-thirds of each reading lesson finds children engaged in actual reading activity. In far too many classrooms and pull-out instructional settings, children are lucky if they spend more than 15 minutes actually reading during classroom reading lessons (Brenner, et al, 2009). There are several reasons for this unfortunate achievement. First, it is in only a few schools where Title 1 and special education reading instructional services are scheduled outside the classroom reading instructional period. Second, there seems not to exist any commercial curriculum framework that can be purchased that provides more than 15 minutes of daily reading but almost all provide 75 minutes of diddly work (think seatwork here). Third, few special program teachers seem

even aware that the children they serve experience fewer minutes of high-quality reading instruction than anyone else in the building. Fourth, almost no special program teachers are aware of the research that indicates that time spent doing worksheets or other skill and drill activities is largely wasted time. Wasted, in that the number of minutes children spend doing worksheets or skill drills has no function in developing better readers, at least I have found no study where the time spent on seatwork has had a positive effect of reading achievement. Time spent actually reading during reading lessons, on the other hand, has been identified as the only aspect of reading lessons linked to higher reading achievement (Allington, 2014a, Foorman, et al, 2006).

This second key element of high-quality reading lessons, actual reading volume, is difficult to achieve for a number of reasons. First, no basal reader provides sufficient material that would have children reading for an hour or more every day. A recent study of the amount of reading during the No Child Left Behind era (Brenner, Hiebert & Tompkins, 2009) found that children averaged 18 minutes of daily reading activity during their 90 minute reading lesson, but a quarter of the children were also observed on days when they read nothing during their reading lessons. Now 18 minutes a

day of reading is better than no actual reading, but not much better, if your goal is all children becoming proficient readers. As long as school systems and teachers consider following basal reader lesson designs as adequate, we will have few good readers, as is the case today.

A third key element of high-quality reading instruction is the opportunity for children to talk to each other about what they have read. In way too many classrooms you will not observe children engaging in discussions of anything they have read. In a classic study of the use of discussion in classrooms, Applebee, Langer, Nystrand & Gamoran (2003) found little opportunity for student discussion in any of the 64 classrooms they visited in 5 states. In addition, it was when teachers were teaching the better readers that discussion was observed. In the better reader lessons, discussions occurred more often and they tended to last almost 15 minutes when they occurred. In lessons for poor readers however, fewer discussions were observed and those discussion opportunities that were observed were far shorter than those of good readers (15 mins. vs. 4 mins. of average length of discussion). Because having children engage each other in discussion was linked to higher achievement in both reading and

and writing for both higher and lower achieving students, Applebee and his colleagues (2003) noted that increasing opportunities for discussion should be a central feature of plans to enhance reading (and writing) achievement.

Finally, a fourth feature of high-quality reading lessons is doing less oral guided reading and more guided silent reading (Allington & McGill-Franzen, 2010). Let me note that I wonder why teachers have anyone above first grade reading aloud and why silent reading doesn't make up 2/3 of all first-grade reading. I worry that the emphasis we see on oral reading in so many reading lessons for struggling readers is one of the factors that has slowed their progress towards proficiency. Teachers have told us they rely on students' oral reading to monitor their reading accuracy. Perhaps, but since good readers read aloud far less frequently than poor readers should one assume that accuracy is not a concern with good readers?

What reading instruction for poor readers sounds like

Reading aloud requires one to focus attention on the performance aspect – that is, on “sounding good” when reading. Besides, once our children gain a few years in age, oral reading almost vanishes as a manner of reading. Reading aloud also allows

others (other students primarily) to also focus on whether the reader sounds good when reading aloud. Almost 40 years ago I published a paper comparing oral reading errors made by good and poor readers while reading aloud during one of their reading lessons (Allington, 1983). Audio recordings were collected of good and poor readers reading aloud during a reading lesson. The focus of that study was on teacher responses to the oral reading errors. What we found was stunning. Basically, teachers rarely responded at all when good readers made an oral reading error. When they did respond to an error that good readers made their most common point of interruption was at the end of the sentence and their most common response was simply, “Will you read that again?” (Allington, 2014b).

But when poor readers made an oral reading error, the teachers almost always immediately interrupted. The most frequent teacher responses that occurred when poor readers made an oral reading error was quite different from their responses to good readers. Comments basically focused on elements of the word that had been misread as in, “Should that be a long or short vowel sound?” Or, “What letter does that word begin with?” Or the teacher simply said the correct word and the students read on. I argued all those years ago that the almost constant interruptions of poor

readers created children who never self-corrected (because the teacher did that) and who learned to read in a word-by-word manner (so the teacher would have a ready space for the interruption). I also noted that poor readers almost never had the benefit of knowing what the words that followed the misread word were and so they were penalized because the constant and frequent interruptions by their teachers made self-correction almost impossible.

Two other factors seemed important also. First, constant teacher interruptions created word-by-word reading patterns which then created children who read dysfluently – they read word-by-word. Second, the constant array of interruptions, especially interruptions focused on words or word parts, created children who typically had low comprehension of what they had just read (or just tried to read) and low self-correction of reading errors. Clay (1969) found that when reading aloud it was the children who self-corrected oral reading errors that became good readers. Children who experienced the teacher or another child interrupting them became poor readers. In other words, day after day struggling readers whose teachers were responding to oral reading errors in a very different way than they responded when good readers read aloud were creating children who read slowly and too often simply stopped reading when

they came to a word they didn't recognize and then they raised their eyes and looked at the teacher. In other words, the most common reading environment experienced by struggling readers maintained their inefficient approach to reading and fostered a reliance upon the teacher to provide the word or useful hints.

I should also note that the other children in both reading groups seemed to reflect their teachers' responses when they interrupted another child's reading. That is, good readers rarely offered any response when another good reader made an oral reading error. This was perhaps because their teacher had often responded to their interruption of another child by saying simply, "Jerome, who is supposed to be reading right now? Not you, right? So, let's allow Maria to read without any interruptions." What seems to be at work here in American schools is a subtle, but effective, strategy for assuring that struggling readers will never read proficiently. Put another way, what one can observe in almost any school is poor readers being treated quite differently from good readers. And yet, the teachers we interviewed told us they intended their responses to both groups to be 'helpful.' Almost none of the teachers had noticed how differently they responded to good and poor readers.

The different reading environments experienced by good and poor readers every day results in some children who know how to read silently with comprehension and other children who are simply barking at print. I will note that the teachers we studied did think that their interruptions of poor readers was a good idea. A good idea, because the poor readers were making errors and not self-correcting themselves. They did not appear to understand that it was the timing, as well as the content, of their interruption behaviors were the central reason poor readers did not self-correct (Allington, 2014b).

I write all of this in the hopes that you will see that most struggling readers are involved in reading lessons that are unlikely to produce reading proficiency. In addition to the differences noted above, there is also the fact that good readers get to read much more during their reading groups. Much of this is related to the fact that poor readers are much more likely to be asked to read aloud, while good readers are most likely asked to read silently. During an oral reading performance only a single child is actually reading while during a silent reading performance all children are reading. Because poor readers read aloud, they read fewer words each session than do the better readers in their classrooms. The difference in the number of words read each day is substantial and given that the volume of reading children do is the best predictor of how well they read (Allington, 2014a,

Foorman and colleagues, 2006), and yet we continue to offer struggling readers far fewer opportunities to read thereby ensuring they continue to struggle.

What decoding Dyslexia should focus their efforts on

Readers should have noticed by now that I have not mentioned phonics instruction as I have attempted to characterize high-quality reading instruction. This is not because phonics is not important to the development of reading proficiency. But the role that phonics and phonemic awareness instruction play is rather small and of rather short-term duration. What we learned from the report of the National Reading Panel (2000) is that “phonics instruction appears to contribute only weakly, if at all, in helping [the students in the studies assessed] apply these [decoding skills] to read text and to spell words” (2-108). More recently, Foorman and her colleagues (2006) found that once the number of minutes of actual reading during over one hundred first and second grade classrooms’ reading lessons was entered into the data set the time allocated to text reading loaded positively on its own factor while time spent in preparation to read and giving directions loaded negatively on reading growth. Only time

allocated to text reading explained any of the variance on any of the outcome measures including word recognition, decoding and passage comprehension. No other time factor, including time spent on phonemic awareness, word recognition or decoding were related to reading growth.

Recall also the outcome of the phonics emphasis under the Reading First program of the No Child Left Behind legislation (Gamse and colleagues, 2009). Minutes spent on phonemic awareness and phonics in grade 1 were negatively correlated with test scores while minutes spent on fluency, vocabulary, and comprehension were positively associated with test score increases. Same in grade 2 except that time spent on fluency was also negatively related to test score gains (p. 55). While teachers in schools participating in the Reading First program were found to have spent more time teaching reading and spent more time teaching the five elements of the Reading First program, none of this improved the reading achievement of children attending high-poverty schools. One might wish that adding a greater emphasis on decoding instruction would have improved reading achievement, but in this large-scale and federally funded effort the shift in that direction produced no positive effects on the reading achievement of participating children (Gamse, et al, 2009). If

anyone wonders why Congress defunded both NCLB and Reading First I would simply point to the federally funded evaluation findings. It seems that what the evaluation actually shows is that virtually all American primary grade teachers know that decoding is important and most have developed instructional plans that support the development of decoding proficiency. Thus, imposing a greater emphasis on developing decoding skills had little to no effect on reading achievement. In other words, what you get with higher scores on the DIBELS assessments is higher scores on an unimportant aspect of beginning reading.

Now having written all that, let me note that children do need to acquire effective decoding skills. But also note that the time teachers allocated for actual reading during their reading lessons was, in fact, powerfully related to reading achievement. Effective decoding skills have rarely, if ever, been developed with any of the numerous decoding curriculum materials currently available (What Works Clearinghouse (WWC), 2010).

I will also note that the WWC provides summaries of the research available on instructional programs for developing readers and every primary grade teacher should visit the WWC website (<http://ies.ed.gov/ncee/wwc/interventionreport.aspx?sid1/4528>) and read each of the summaries for the multitude of programs marketed to improve reading performance. If you visit the WWC website, you will find a summary of the research on the Orton-Gillingham reading program recommended by Decoding Dyslexia and the International Dyslexia Association (https://ies.ed.gov/ncee/wwc/Docs/InterventionReports/wwc_ortongill_070110.pdf).

The WWC concludes that while they reviewed 31 studies of the Orton-Gillingham approach, none of the studies were found to be acceptable because they failed to meet the WWC standards for reliable research. In other words, none of the programs marketed as ‘structured literacy’ have any acceptable research base. I use the term ‘structured literacy’ following Hal Malchow’s president’s column that appeared in an issue of *Perspectives on Language and Literacy* (Malchow, 2015), a journal from the International Dyslexia Association (IDA). I thank the Lord that the government created the WWC under the NCLB Act because both the Decoding Dyslexia and the IDA continually argue that “structured literacy” is a research-based

phenomenon. Structured literacy is a decoding emphasis method that has a “multi-sensory” component. The method has been around since Orton and Gillingham published the first paper on multi-sensory reading instruction in the 1930s, and yet no one has ever conducted a reliable study of the effects of structured literacy instruction on the reading achievement of children. No one. There are published papers that are typically identified as the research supporting the use of structured literacy programs, but if you go to the WWC website you can find out why each of these studies were rated as unacceptable with or without reservations.

Conclusion

Rather than attempting to promote unproven instructional tools (structured literacy or multi-sensory programs), both the IDA and DD should be pursuing the funding to establish a research base for first identifying “dyslexic” children and then research evaluating the multiple approaches for teaching “dyslexic” children to read (Gabriel, 2018). An ideal research base would include well designed studies of the effects of structured literacy programs as well as studies of the most appropriate methods for developing teacher’s knowledge of effective literacy instruction and the effective delivery of high-quality reading instruction.

I will continue to argue that until such a research base is available. Everyone must treat “structured literacy” as one possible way to serve the needs of struggling readers, but one of the many ways that has no research base supporting its use. We know much about effective reading instruction (Allington & Johnston, 2002, Taylor, Pearson Peterson & Rodriguez, 2003), but the DD websites and the IDA websites and journals provide not even scant attention to instructional methods that multiple rigorous research studies have demonstrated as effective and necessary components of high-quality reading instruction. Until everyone has actually read the reliable research available, children would be better if DD and IDA cleaned their houses and supported research that might tell us whether their recommendations make any sense to implement.

Bibliography

- Allington, R. L. (1983). The reading instruction provided readers of differing abilities. *Elementary School Journal*, 83, 548-559.
- Allington, R. L. (2010). Recent federal education policy in the United States. *International Handbook of English, Language and Literacy Teaching* (pp. 496-507). D. Wyse, R. Andrews and J. V. Hoffman. New York: Routledge.
- Allington, R. L. (2014). How reading volume affects both reading fluency and reading achievement. *International Electronic Journal of Elementary Education*, 7(1), 13-26.
- Allington, R. L. (2014). Reading moves: What not to do. *Educational Leadership*, 72(2), 16-21.
- Allington, R. L. and Johnston, P. H., Eds. (2002). *Reading to learn: Lessons from exemplary 4th grade classrooms*. New York: Guilford.
- Allington, R. L. and McGill-Franzen, A. (1989). School response to reading failure: Chapter 1 and special education students in grades 2, 4, & 8. *Elementary School Journal*, 89(5), 529-542.
- Allington, R. L. and McGill-Franzen, A. (2010). Why so much oral reading? *Revisiting silent reading: New directions for teachers and researchers* (45-56). E. H. Hiebert and R. Reutzel. Newark, DE: International Reading Association.

- Applebee, A. N., Langer J. A., Nystrand M., and Gamoran A. (2003). Discussion-based approaches to developing understanding: Classroom instruction and student performance in middle and high school English. *American Educational Research Journal*, 40(3), 685-730.
- Bloom, B. (1974). Time and learning. *American Psychologist*, 29, 681-688.
- Brenner, D., Hiebert, E. H., and Tompkins R. (2009). How much and what are third graders reading? *Reading more, reading better* (pp.118-140). E. H. Hiebert. New York: Guilford.
- Clay, M. M. (1969). Reading errors and self-correction behaviour. *British Journal of Educational Psychology*, 37(1), 47-56.
- Croninger, R. G. and Valli, L. (2009). Where is the action? Challenges to studying the teaching of reading in elementary classrooms. *Educational Researcher*, 38(2), 100-108.
- Fink, R. (2006). *Why Jane and Johnny couldn't read -- and how they learned*. Newark, DE: International Reading Association.
- Fink, R. (1998). Literacy development in successful men and women with dyslexia. *Annals of Dyslexia*, 48, 311-346.
- Foorman, B. R., et al. (2006). The impact of instructional practices in grades 1 and 2 on reading and spelling achievement in high poverty schools. *Contemporary Educational Psychology*, 31(1), 1-29.
- Gabriel, R.E. (2018). Understanding dyslexia laws and policies. *Journal of Reading Recovery*, (Spring), 25-34.
- Gamse, B. C., et al. (2009). *Reading First Impact Study: Final Report* (NCEE 2009-4038). Washington, DC, National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.
- Kiesling, H. (1978). Productivity of instructional time by mode of instruction for students at varying levels of reading skill. *Reading Research Quarterly*, 13(4), 554-582.
- Malchow, H. (2015). Structured literacy for all readers. *Perspectives on Language and Literacy*, 41(2), 5.

- National Reading Panel. (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. NIH Publication 00-4769 (<http://www.nichd.nih.gov/research/supported/Pages/nrp.aspx/>)
- Pressley M. and Allington R. L. (2014). *Reading instruction that works*. 4th ed. New York: Guilford.
- Taylor, B. M., Pearson P. D., Peterson, D. S., and Rodriguez M. C. (2003). Reading growth in high-poverty classrooms: The influences of teacher practices that encourage cognitive engagement in literacy learning. *Elementary School Journal*, 104(1), 4-28.
- Vaughn, S., et al. (1998). Broken promises: Reading instruction in the resource room. *Exceptional Children*, 64, 211-225.
- Vaughn, S. and Linan-Thompson, S. (2003). What is special about special education for students with learning disabilities? *Journal of Special Education*, 37(3), 140-147.
- Valli, L., et al. (2012). Studying high-quality teaching in a highly charged policy environment. *Teachers College Record*, 114(4),1-33.
- What Works Clearinghouse (2010). *Orton–Gillingham-based strategies*. from https://ies.ed.gov/ncee/wwc/Documents/InterventionReports/wwc_ortongill_070110.pdf.