# ITA Foundation Research-Based Intervention Guide

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ITA Foundation Research-Based Intervention Guidelines

Introduction

Although some people who hear "Initial Teaching Alphabet Foundation" think of "that funny alphabet," our educational programs encompass so much more than the phonetic alphabet that we use to remediate reading failure and introduce English learners to the pronunciation, reading, and writing of English. The initial teaching alphabet (ITA) is only a tool, although an essential one at the beginning of English literacy.

This paper places the use of ITA in its crucial and unique position while highlighting the remaining research-based strategies for development of expert and critical reading for all who need help at later stages of reading development.

To contextualize where in the reading process ITA meets the needs of struggling readers, we offer this graphic from the International Dyslexia Association, which shows that a deficit in phonological awareness negatively impacts every subsequent stage of reading development. It is at this level that the Foundation has developed effective interventions using the phonetic alphabet (ITA).
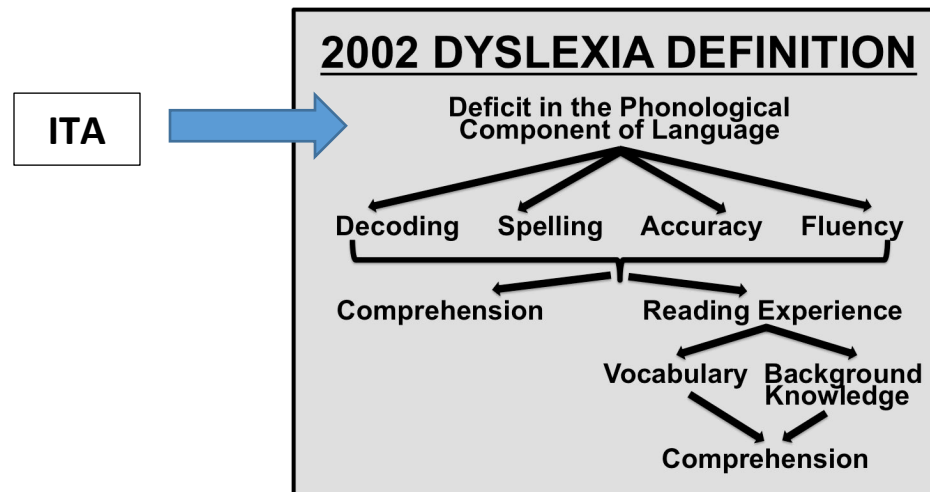
The initial teaching alphabet (ITA) also helps newcomers to English learn how to pronounce, read, and spell our complex orthography where sounds do not map neatly to letters. English vowels are especially challenging for English learners, particularly those who come from different sound-letter relationships. An example of how ITA can help Ojibwe students transfer from the symbol-sound system of Ojibwe vowels to the English equivalents is depicted in this contrastive analysis:

The topic of ITA for English learners is beyond the score of this paper, but examples of how ESL teachers can use ITA with English learners are included in the following publication.

Anderson, J. (2017). The use of the initial teaching alphabet (i.t.a.) for acquisition of English phonology, vocabulary, grammar, reading, and writing by speakers of other languages. *EDULEARN17 Conference.* Barcelona, Spain.

FAQ for Evaluating and Choosing Intervention Programs

Jane Flynn Anderson, Ph.D.
ITA Foundation, 2019

1. What does "research-based" vs. "research-tested" mean?

"Research-tested" intervention programs are those whose efficacy has been studied empirically. You should be looking for research studies that have compared a treatment group (e.g., phonics program) to a similar control group (e.g., regular classroom instruction) to determine whether the treatment resulted in an educationally-significant difference in outcome, e.g., reading level. Some examples of research-tested interventions are: Reading Recovery, Reading Mastery, Read 180, ITA/ROAR.

"Research-based" are programs that are carefully designed to follow the recommendations and procedures of research-tested interventions. Whenever a publisher or author claims that their program is "research-based," you should examine it carefully in relation to the recognized compendiums of recent research: National Reading Panel Report (NRP) and What Works Clearinghouse (WWC) Practice Guides.

2. What's the difference between "statistical significance" and "educational significance"?

For teachers and administrators looking for effective interventions, the difference is very important. Large sample sizes (e.g., 100) will almost certainly result in statistical significance. But the difference may be so small that it is educationally not worth implementing. One example: Many decades ago, my team tested over 5,000 kindergarten children to determine which reading precursors would best predict reading failure and success from 1st through 5th grade. Because one part of my screening battery was a visual-motor test, I could ask the question: Are girls better at eye-hand tasks (e.g., printing) compared to boys? The answer was yes, significantly so! But the test score difference was only one point, hardly what I would consider educationally significant.

The gold standard for judging educational significance is the Effect Size (ES). An Effect Size of .50 means that the average treatment student gained 19 percentile points as a result of the treatment.

3. Where should I look for guidance in selecting interventions?

Often the first resource that comes to mind is What Works Clearinghouse. However, before relying on this for selections at the local school level and for your particular students, you should be aware of how WWC selects the studies that they rate as effective:

1. To be eligible for consideration, studies must include a very large number of treatment students (at least 100) and control (at least 100) students. This excludes many smaller studies that may have greater relevance to your students. This chart shows WWC selection criteria.

Key factors: study sample, sites, population 19

Evidence Factors	STRONG THEORY	EVIDENCE OF PROMISE	MODERATE EVIDENCE OF EFFECTIVENESS		STRONG EVIDENCE OF EFFECTIVENESS	
Number of Studies	n/a (logic model only)	At least one	At least one	At least one	At least one	At least two
Study Findings on a Relevant Outcome		Statistically significant, substantively important (0.25 standard deviation or larger) positive association	Statistically significant positive impact with no unfavorable and overriding impacts	Statistically significant positive impact with no unfavorable and overriding impacts	Statistically significant positive impact with no unfavorable and overriding impacts	Statistically significant positive impact with no unfavorable and overriding impacts
What Works Clearinghouse Standards			Meets without reservations (RCT)	Meets with reservations (RCT or QED)	Meets without reservations (RCT)	Meets with reservations (RCT or QED)
Study Sample Size				Large sample	Large sample	Large sample
Number of Study Sites				Multi-site sample	Multi-site sample	Multi-site sample
Similarity of Population			Overlaps with proposed populations or settings	Overlaps with proposed populations or settings	Overlaps with proposed populations and settings	Overlaps with proposed populations and settings

Official definitions for each term are available in 34 CFR 77.1.(c)

2. WWC does not distinguish between statistical and educational significance. They do report percentile improvement data. In examining these, note what kind of test(s) were given. For example, Reading Recovery found "strong positive effects for general reading achievement." However, the test

used was the RR-developed test, completed by the RR teacher who delivered the treatment, and confounded by assessing components of the RR intervention, e.g., print awareness. Other independent tests did not show that level of significance.

4. What other sources provide guidance for selection of intervention programs?

A. **National Reading Panel (2000).** Although this resource is now 18 years old, I know of no major study that contradicts the conclusions of the Panel (with the exception of those in the chapter on Computer Technology and Reading Instruction, which is very outdated). To be included in this meta-analysis, studies had to have a treatment and control group, with very-well described procedures so that interventions could be implemented at the classroom level.

Pay attention to the appendices of this compendium, as you will find valuable information about specific intervention programs. For example, this selection from Appendix D of the phonics chapter shows that Lippincott (a linguistic program) has an ES of .50, indicating that it is educationally significant, while only two of the Orton-Gillingham programs meets that ES threshold. (Note that one required two years of intervention to reach an educationally-significant Effect Size.)

47 Lippincott (S)	Sm gp	3rd RD	1 yr.	Whole word	0.50
13 Orton-Gillingham (S)	Sm gp	gr 2-3 RD	1 yr.	Whole word	0.27
41 Orton-Gillingham (S)	Sm gp	M=11yr RD	2 yrs.	Reg. curr.	/--0.54
47 Orton-Gillingham (S)	Sm gp	3rd RD	1 yr.	Whole word	0.04
55 Orton-Gillingham (S)	Class	3rd lo ach.	1 yr.	Previous prog. (RC)	0.63
55 Orton-Gillingham (S)	Class	4th lo ach.	1 yr.	Previous prog. (RC)	0.19
55 Orton-Gillingham (S)	Class	5th lo ach.	1 yr.	Previous prog. (RC)	-0.20
55 Orton-Gillingham (S)	Class	6th lo ach.	1 yr.	Previous prog. (RC)	0.13

B. **Developing Early Literacy: Report of the Early Literacy Panel (2008).** If you are looking for Pre-K through first-grade intervention programs, this is an excellent source. Many of the findings echo the conclusions of the NRP.

C. What Words Clearinghouse: Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade. This educator's Practice Guide reviews the research in reading since 2000 and gives concrete examples of how to implement the conclusions, which again echo the findings of the 2000 National Reading Panel, as you can see in the screen grab below:

What Works Clearinghouse has developed Practice Guides in all areas of literacy, including spelling and writing, at all levels, and in many other school-related topics such as *Preventing Dropouts in Secondary Schools*. These Practice Guides summarize the research and provide concrete examples of how to implement research-based interventions. Free for download at: https://ies.ed.gov/ncee/wwc/practiceguides

D. Individual research studies published in peer-reviewed journals, and doctoral and masters studies that replicate successful strategies. For example, many master's theses have focused on Reciprocal Teaching, supporting the original studies of the 80s that RT results in better comprehension for all students, and particularly for struggling readers (grades 4-8). Repeated Oral Assisted Reading (ROAR), based on the fluency

recommendations of the NRP, has been supported in studies involving students with learning disabilities. The use of ITA for remediation of phonological deficits in individuals with reading disabilities/dyslexia has also been supported by research.

5. Is ITA Research-Based or Research-Tested? The use of the phonemic alphabet (ITA) for remediation of reading disabilities/dyslexia in individuals from elementary through college levels is both Research-Based and Research-Tested.

A. **Research-Tested evidence for ITA.** Contrasting-groups research by Flynn and colleagues (1991, 1993) found that use of the initial teaching alphabet (ITA) for reading and writing resulted in significantly-improved reading fluency and conventional spelling in 2nd-5th grade struggling readers compared to Orton-Gillingham and DISTAR (Reading Mastery).

Flynn, J., & Deering, W. (1993). Eavesdropping on the brain: The Gundersen Medical Foundation dyslexia studies. *The Gundersen Medical Journal,* 1 (2), 49-54.

Flynn, J., and Boder, E. (1991). Clinical and electrophysiological correlates of dysphonetic and dyseidetic dyslexia. In J.F. Stein (Ed.). *Vision and Visual Dyslexia.* Volume 13. Basingstoke: The MacMillan Press, Ltd., 121-131.

Lyon, G.R., and Flynn, J. (1991). Educational validation studies with subtypes of learning disabled readers. In B.P. Rourke (Ed.). *Neuropsychological Validation of Learning Disability Subtypes.* New York: Guilford Press, 223-242.

An ITA spelling intervention for students with phonological deficits, *Slash and Dash*, has been shown to be effective for 4th-6th grade LD students, 3rd-5th grade Title 1 students, and college freshmen in a developmental reading course.
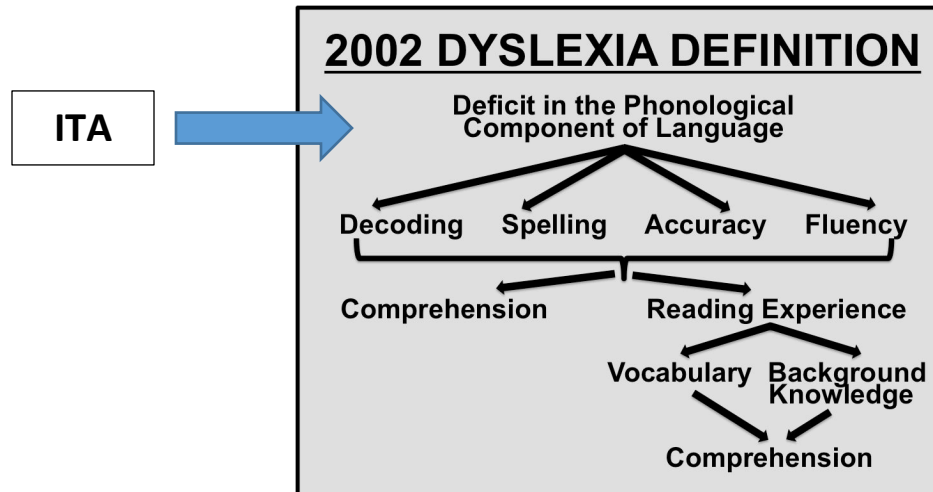
Debner, B. Prescriptive Spelling Approach for Students with Learning Disabilities. MLE Thesis, Saint Mary's University of Minnesota

Debner, B., & Anderson, J. (2017). Correction of phonological deficits in students with dyslexia through the use of a phonemic alphabet, the initial teaching alphabet (ITA). *EDULEARN17 Conference.* Barcelona, Spain.

Moore, S. (2017). Using a Phonetic Alphabet, the Initial Teaching Alphabet (ITA to Remediate Reading Disabilities in First-Year College Students. *EDULEARN17 Conference.* Barcelona, Spain.

B. **Research Base for Use of ITA for reading/dyslexia interventions.** The International Dyslexia Association in 2002 published a graphic showing that phonological deficits are the root cause of reading failure. Further, it negatively impacts development at every level of reading achievement. Use of the ITA phonemic alphabet develops both the auditory-level phonological skills (analyzing SPOKEN words by syllables and sounds), and the written level (spelling words by sound as the necessary precursor to success with decoding).

2002 DYSLEXIA DEFINITION

ITA → Deficit in the Phonological Component of Language

Decoding   Spelling   Accuracy   Fluency

Comprehension   Reading Experience

Vocabulary   Background Knowledge

Comprehension

Dickman, E. (February, 2017). Do we need a new definition of dyslexia? Retrieved July 30, 2019. https://dyslexiaida.org/do-we-need-a-new-definition-of-dyslexia/

6. How long should I wait to change an intervention if it appears that the current one is not working?

One of the unfortunate misunderstandings that has arisen because of RtI and need to benchmark progress is that if an intervention is not working in six weeks, it should be discontinued. The vast preponderance of research documents that at least three months, and in many cases at least a full school year, is needed to confirm that a student is benefitting from a particular intervention. This does not mean that benchmarking and scrutiny of response to intervention shouldn't be ongoing, but that rigid time-limited guidelines are not the appropriate benchmark.

This is particularly important to consider since the recent consensus in long-term follow up research is that even after a year of intensive intervention in the early grades, many children will not maintain their progress without continued targeted help for a number of years. For example, Chapman & Tunmer (2016) found that of the students who had successfully exited Reading Recovery in 1st grade, 45% were achieving in stanines 1-3 (below basic) three years later. Taiba, et al. (Florida Center for Reading Research, 2009) found "little evidence that early PA interventions enabled students to catch up in phonological or reading skills to typically-developing readers."

My own multi-year research found that 2nd-5th graders required, on average, 2.5 years of intensive reading, spelling, and writing intervention to meet grade-level expectations. In fact, in the early years of my ITA/ROAR research, I used to graduate students when their reading accuracy reached expected level. Many of them, unfortunately, were still slow readers. When I did a follow up study at high school level, these students had gained in reading accuracy, but remained significantly slower than age-expected norms would predict. Lesson learned: Full intervention needs to include automaticity, and that may take as long as five years for some.

ITA Foundation Research-Based Intervention Guide: K-2nd

Jane Flynn Anderson, Ph.D.

Student Deficits and Initial Assessments	Intervention(s)	Research Base	Progress Monitoring
Phonological Awareness: **Auditory Analysis Test-Revised (AAT-R)** **Yopp-Singer** **Screening for Reading Success (SRS)** • Syllable-Sound • Phonemic Segmentation	**Skills:** counting, segmenting, blending, and deleting syllables and sounds in spoken words **Interventions:** 1. *Sound Detective Kit-Auditory Level,* Flynn (2000) 2. *Phonemic Awareness for Young Children,* Adams, et. al (1998) 3. *WWC Foundational Skills Practice Guide*, pp. 14-18	**National Reading Panel (2000)** pp. 2-1 to 2-86 • 52 studies • Educationally-significant outcomes for learning PA (ES=.86), reading (.53) and spelling (.59)[a] • Significant effects on ability to read words, on reading comprehension, and on standardized test performance • Effects lasted well beyond the training period **WWC: Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade (2016) pp. 14-21** • STRONG level of evidence for effectiveness of teaching PA • 17 studies 2000-2014	**Weekly:** *Developmental Stages for Acquisition of Literacy Skills* (Phonological checklist for mastery of specific skills) **Every 3 months**: AAT-R (Use after sentences to words, words to syllables and words to phonemes have been introduced and practiced)

Phonemic Awareness/Phonics
 	
AimsWeb
• Letter Naming Fluency (LNF)
• Letter Sound Fluency (LSF)
 	
Test of Word Reading Efficiency
• Phonemic Decoding Efficiency
	Skills:
	• Matching sounds to letters
	• Decoding words
	• Writing unknown words by sound
	
	Interventions:
	
	1. *Sound Detective Kit-Phonics Level*
	
	2. *WWC Foundational Skills Practice Guide,* pp. 22-31
	
	3. Spelling by Sound using ITA
	
	4. Spelling by Pattern
		National Reading Panel (2000)
		• "Solid evidence that systematic phonics instruction makes a bigger contribution to children's growth in reading than alternative programs providing unsystematic or no phonics instruction."
		• ES=.58 for kgtn. at risk, and .74 for 1st graders at risk
		• 38 studies, 66 treatment-control comparisons
		• All phonics approaches effective: synthetic, analytic, miscellaneous (linguistic, e.g., ITA)
		
		Developing Early Literacy: Impact of Code-Focused Interventions on Young Children's Early Literacy Skills (2008) 107-152
		• Code-focused interventions that included PA had moderate to large effects on PA, alphabet knowledge, reading and spelling
		• 83 studies
			Checklist for Monitoring Phonics Skill Development
			
			Spelling by Sound Stage
			Given dictated words, student can:
			• Correctly write CVC words, e.g., cat, top
			• Spell unknown one-syllable words by sound, e.g., meet, sick
			• Spell unknown two-syllable words by sound
			
			Spelling by Pattern Stage
			• Spell unknown dictated words according to common spelling patterns, e.g.
			    o beginning /k/
			    o ending /k/
			    o ay, ai, a
			    o oa, ow, o

Screening for Reading Success • Alphabet-Word • Sound Recognition		**Spelling by Sound (Invented Spelling) Research** • Teaching children to spell words by how they sound has positive impact on reading and spelling conventiionally Martins et al. (2013). The impact of invented spelling on early spelling and reading, Oullette & Senechal. (2008). A study of invented spelling and its impact on learning to read. Flynn, J., & Deering, W. (1993). Eavesdropping on the brain: The Gundersen Medical Foundation dyslexia studies. **WWC: Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade (2016)** pp. 22-31 • 13 studies found strong evidence of word reading and encoding outcomes for spelling by sound/PA	• Analysis of student free writing indicates has mastered common spelling patterns in misspelled words
Oral and Receptive Language **Peabody Picture Vocabulary Test (PPVT-5)** **Expressive Vocabulary Test (EVT-3)** **Record of Oral Language** **Qualitative Reading Inventory (QRI-6)** • Listening Comprehension	**Skills:** • Listening comprehension (Story reading time) • Vocabulary • Answering questions, retelling **Interventions:** 1. *Project Literacy Boost* 2. *Reading Powers*	**National Reading Panel (2000)** pp. 4-44 to 4-115) Instruction in the following skills improves comprehension • Question answering 17 studies • Question generation 27 studies • Story Structure 17 studies **WWC: Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade (2016)** pp. 6-12 • Provide instruction in broad oral language skills • Inferential and narrative language and academic vocabulary **Developing Early Literacy: Impact of Shared-Reading Interventions on Young Children's Early Literacy Skills (2008)** pp. 153-172 • Shared-reading did NOT have significant impact on early literacy skills • Shared-reading DID significantly improve oral language (ES=.73)	**PROJECT LITERACY BOOST** **Each Session:** Tally # and types of questions asked and student responses; Complete retelling checklist **Every 3 months:** Review Literacy Boost session reports to tally frequency and level of child responses by category **End-of-Year** Record of Oral Language (ROL) to assess growth in receptive and expressive language QRI: Listening Comprehension • Literal • Interential READING POWERS Assessment checklists based on each Power

Reading Accuracy and Fluency	Skills:	National Reading Panel (2000) pp. 3-1 to 3-43	Guided Oral ReReading
AimsWeb: • Nonsense Word Fluency (NWF) • Oral Reading Fluency (ORF) **Test of Word Reading Efficiency** • Sight Word Efficiency • Phonemic Decoding Efficiency **Qualitative Reading Inventory (QRI-6)** • Oral Reading Instructional Level • WPMC at instructional level	• Applying word recognition and decoding skills to accurately read grade-level text (91% or higher) • Automaticity-Increasing fluency (WPMC) to free cognitive resources for comprehension of what is read **Intervention to build accuracy: Guided Oral ReReading** **1.** *BeginningReads, Levels 1-10* • For children with well-developed phonological and phonemic awareness • Instructional range: Pre-primer to mid-2nd grade • Mix of phonetically-regular and sight words strategically repeated for mastery **2.** *ITA Linguistic Readers, levels 1-2* • For children who need intensive PA intervention • Recreates the process of learning to read in a transparent language like Ojibwe, • Develops accuracy and fluency of English reading **Intervention to build fluency: Repeated Oral Assisted Reading (ROAR)**	• Guided oral reading procedures had a "consistent, positive impact on word recognition (ES=.50), fluency (ES=.44), and comprehension (ES=.35) as measured by a variety of test instruments and at a range of grade levels • Aggregated reading outcomes ES=.50 • Research on programs encouraging children to read more (SSR, Accelerated Reader) "failed to find a positive relationship between encouraging reading and either the amount of reading or reading achievement." **WWC: Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade (2016)** pp. 32-37 • 18 studies showed positive effects on oral reading accuracy and oral reading fluency • Provide support from a more proficient reader who can provide prompting and scaffolding when students encounter challenging word • Use instructional-level text (90% accuracy or better) **Research on ITA compared to traditional orthography for learning to read English** *The effect of orthography on the acquisition of literacy skills,* Thorstad (1991) http://itafoundation.org/effectiveness/research/ • ITA children mastered reading in one year compared to two years for group learning with traditional English alphabet **Research on effectiveness of ITA/ROAR** Flynn, J., & Deering, W. (1993). Eavesdropping on the brain: The Gundersen Medical Foundation dyslexia studies. *The Gundersen Medical Journal,* 1 (2), 49-54. • 2nd-5th graders in ITA/ROAR achieved significantly higher reading fluency and spelling compared to peers in Orton-Gillingham or Reading Mastery	**Guided Oral ReReading** **1.** *BeginningReads* • Mastery check at the end of each story: Student reads with at least 90% accuracy on story copy without words • Mastery check for moving from one book level to another: Student reads with at least 90% accuracy on the Reader's Theater that uses core vocabulary in new syntactical structures **2.** *ITA Linguistic Readers,* Levels 1-2 • Mastery check at the end of each story: Student reads with at least 90% accuracy on story copy without words **ROAR (using either traditional orthography or ITA Linguistic Readers)** **Daily**: charting of pre-post test accuracy and fluency **Every 3 weeks**: Chart cold read on a passage read sometime during the last 3 weeks **Move to higher level:** when cold read across 6-8 pre-tests is above 97% acc. and within 10 WPMC of average WPMC for the current reading level (NOT grade level—use regional norms, not Hasbrouck and Tindahl) **Discontinue ROAR:** When cold read consistently is at expected reading level (the listening level or grade placement level, whichever is higher) and WPMC is within 10 WPMC of the expected reading level

| | **1. Pearson QuickReads and Fluency Libraries**

2. **ITA Linguistic Readers,** levels 3-5 | Flynn, J., and Boder, E. (1991). Clinical and electrophysiological correlates of dysphonetic and dyseidetic dyslexia. In J.F. Stein (Ed.). *Vision and Visual Dyslexia*. Volume 13. Basingstoke: The MacMillan Press, Ltd., 121-131.

Lyon, G.R., and Flynn, J. (1991). Educational validation studies with subtypes of learning disabled readers. In B.P. Rourke (Ed.). *Neuropsychological Validation of Learning Disability Subtypes*. New York: Guilford Press, 223-242.

• ITA intervention resulted in higher achievement in reading materials written in traditional orthography

http://itafoundation.org/effectiveness/research/ | (table below) |

GRADE LEVEL	WPMC	
	Hasbrouck & Tindahl 2017 National norms	Flynn, 2006 Midwestern norms
1st	60	55
2nd	100	102
3rd	112	117
4th	133	127
5th	146	134
6th	146	150
7th		160
8th		171

[a] Effect Size (ES) of .50 or higher is EDUCATIONALLY important. ES of .50 = percentile gain of 19 points.

ITA Foundation Research-Based Intervention Guide: 3rd-8th

Dr. Jane Flynn Anderson and Peggy Westlund

Student Deficit / Initial Assessments	Intervention(s)	Research Base	Progress Monitoring
Phonological Deficits **Auditory Analysis Test-Revised (AAT-R)** <50% Good Phonetic Equivalents (GFEs) of misspellings on: ● WRAT-4 Spelling Test ● Flynn Developmental Spelling Test	**Skills:** Ability to write unknown 2, 3, and 4-syllable phonetically—correctly writing all sounds and in the right order **Interventions:** "Slash and Dash" with ITA for phonetic spelling, and digital dictionary for correct spelling "Slash and Dash" with ITA for phonetic spelling, and digital dictionary for correct spelling. Slash and Dash Directions: 1. Break words by auditory syllables (\ slash). 2. Break down each syllable by sound (- dash). 3. Write sounds using ITA symbols.	**National Reading Panel (2000)** pp. 2-1 to 2-86 ● 52 studies ● Educationally-significant outcomes for learning PA (ES=.86), reading (.53) and spelling (.59)[a] ● Significant effects on ability to read words, on reading comprehension, and on standardized test performance ● Effects lasted well beyond the training period **WWC: Improving Adolescent Literacy: Effective Classroom and Intervention Practices** Systematic training in metacognitive decoding skills, such as subsyllabic segmentation, transferred to accurate reading of regular and irregular multisyllabic words. Lovett, M., & Steinbach, K. (1997). The effectiveness of remedial programs for reading disabled children of different ages: Does the benefit decrease for older children? Learning Disability Quarterly, 20(3), 189–210. Debner, B. Prescriptive Spelling Approach for Students with Learning Disabilities. MLE Thesis, Saint Mary's University of Minnesota Debner, B., & Anderson, J. (2017). Correction of phonological deficits in students with dyslexia through the use of a phonemic alphabet	**Weekly:** *Developmental Stages for Acquisition of Literacy Skills* (Phonological checklist for mastery of specific skills) **Every 3 months**: AAT-R (Use after sentences to words, words to syllables and words to phonemes have been introduced and practiced) **Phonological Check List**: Students will be able to : ❏ Syllabicate 2-4 syllable words auditorily ❏ Identify the number of syllables in a word ❏ Identify the sounds in a syllable ❏ Match the sounds to ITA symbols ❏ Use an on-line dictionary or a Franklin Speller ❏ Compare traditional orthography to phonetic spelling.

	4. Find traditional spelling in on-line dictionary or Franklin Speller. 5. Write the word in traditional orthography under the phonetic rendition and compare.	(ITA). Eudulearn17 International Conference, Barcelona, Spain. Moore, S. (2017). Using a Phonetic Alphabet, the Initial Teaching Alphabet (i.t.a.), to Remediate Reading Disabilities in First-Year College Students EduLearn17 International Conference, Barcelona, Spain.	

Phonics
 	
Test of Word Reading Efficiency
 	
● Phonemic Decoding Efficiency
	Skills: Ability to select the correct spelling patterns. Knowledge of English sound-letter patterns, e.g., ending /k/ = k, c, ck, que
	
	Interventions:
	
	Spelling by Pattern Manual by Dr. Jane Anderson
		National Reading Panel (2000)
		
		● "Solid evidence that systematic phonics instruction makes a bigger contribution to children's growth in reading than alternative programs providing unsystematic or no phonics instruction."
		● All phonics approaches effective: synthetic, analytic, miscellaneous (linguistic, e.g., ITA)
		● Traditional phonics programs did not show educationally-significant effect for older students with learning disabilities, indicating that newer approaches needed, e,g., spelling by pattern
		
		WWC: Improving Adolescent Literacy: Effective Classroom and Intervention Practices
		
		● There is accumulating evidence that an inadequate ability to decode printed text accurately and fluently may be one reason for students' failure to meet grade level standards in reading.
		
		● Interventions focused at the word level resulted in both improved reading accuracy and improved reading comprehension in older struggling students.
			Checklist for Monitoring Phonics Skill Development
			
			● Spell unknown dictated words according to common spelling patterns, e.g.
			  ❏ beginning /k/= c, k, ch
			  ❏ ending /k/=k, ck, c, que
			  ❏ long a =ay, ai, a, a-e, aigh, eigh
			  ❏ oa, ow, o
			  ❏ tion, sion, cian
			
			● Analysis of student free writing indicates has mastered common spelling patterns in misspelled words.

Vocabulary	Skills:	National Reading Panel (2000) pp. 4-44 to 4-115)	QRI: Listening Comprehension
Peabody Picture Vocabulary Test (PPVT-5) **Expressive Vocabulary Test (EVT-3)** **Qualitative Reading Inventory (QRI-6)** ● Listening Comprehension	● Understanding vocabulary in context ● Using knowledge of Latin roots and affixes to access meanings of new words ● Using knowledge of Greek roots to understand words **Interventions:** Spelling by Meaning ● Latin roots/affixes: Semantic mapping ● Greek roots: Walking Through Words by Meaning Biemiller Tier Two Word lists (literary, historical and editorial words) ● Priority teaching words for 6th grade ● Difficult words at 6th grade	Reading vocabulary is crucial to the comprehension processes of a skilled reader. Five main methods of teaching vocabulary were identified: 1. Explicit Instruction: Students are given definitions or other attributes of words to be learned. 2. Implicit Instruction: Students are exposed to words or given opportunities to do a great deal of reading. 3. Multimedia Methods: Vocabulary is taught by going beyond text to include other media such as graphic representations, hypertext, or American Sign Language that uses a haptic medium. 4. Capacity Methods: Practice is emphasized to increase capacity through making reading automatic. 5. Association Methods: Learners are encouraged to draw connections between what they do know and words they encounter that they do not know. **WWC: Improving Adolescent Literacy: Effective Classroom and Intervention Practices** Recommendation 1. Provide explicit vocabulary instruction Teachers should provide students with explicit vocabulary instruction both as part of reading and language arts classes and as part of content area classes such as science and social studies. Level of evidence: Strong Direct instruction in word meaning includes helping students look up definitions in dictionaries and glossaries, read the words and their definitions, match words and their definitions, participate in oral recitation, memorize definitions, and use graphic displays of the relationships among words and concepts such as semantic maps. Strategies to promote independent vocabulary acquisition skills include analyzing semantic, syntactic, or context clues to derive the meaning of words by using prior knowledge and the context in which the word is presented.	● Literal ● Interential Assessment checklist: Students will be able to: ❏ Look up definitions in a dictionary and glossary ❏ Decode words and their definition ❏ Match words and their definitions' ❏ Walk through words by meaning ❏ Use graphic organizers construct/deconstruct words ❏ Derive the meaning of a word by analyzing the semantic, syntactic, or context clues to deduce the meaning

Reading Accuracy and Fluency	Skills:	National Reading Panel (2000) pp. 3-1 to 3-43	ROAR (using either traditional orthography or ITA Linguistic Readers)
AimsWeb: ● Oral Reading Fluency (ORF) **Qualitative Reading Inventory (QRI-6)** ● Oral Reading Instructional Level ● WPMC at instructional level **FastBridge?** (Discussion)	● Applying word recognition and decoding skills to accurately read grade-level text (91% or higher 3rd-4th; 95-97% acc 5th and up) ● Automaticity-Increasing fluency (WPMC) to free cognitive resources for comprehension of what is read **Intervention to build fluency and accuracy: Repeated Oral Assisted Reading (ROAR)** **1. *Pearson QuickReads and Fluency Libraries*** **2. *ITA Linguistic Readers, levels 3-5***	● Guided oral reading procedures had a "consistent, positive impact on word recognition (ES=.50), fluency (ES=.44), and comprehension (ES=.35) as measured by a variety of test instruments and at a range of grade levels ● Aggregated reading outcomes ES=.50 ● Research on programs encouraging children to read more (SSR, Accelerated Reader) "failed to find a positive relationship between encouraging reading and either the amount of reading or reading achievement." **WWC: Improving Adolescent Literacy: Effective Classroom and Intervention Practices** Recommendation 5. Make available intensive and individualized interventions for struggling readers that can be provided by trained specialists. The choice of supplemental interventions needs to be guided by initial formative assessments that gauge the specific learning needs of struggling readers and individualized to meet students' identified needs. There is accumulating evidence that an inadequate ability to decode printed text accurately and fluently may be one reason for students' failure to meet grade level standards in reading. **Research on effectiveness of ITA/ROAR** Flynn, J., & Deering, W. (1993). Eavesdropping on the brain: The Gundersen Medical Foundation dyslexia studies. *The Gundersen Medical Journal,* 1 (2), 49-54. ● 2nd-5th graders in ITA/ROAR achieved significantly higher reading fluency and spelling compared to peers in Orton-Gillingham or Reading Mastery	**Daily**: charting of pre-post test accuracy and fluency **Every 3 weeks**: Chart cold read on a passage read sometime during the last 3 weeks **Move to higher level:** when cold read across 6-8 pre-tests is above 97% acc. and within 10 wpmc of average wpmc for the current reading level (NOT grade level—use regional norms, not Hasbrouck and Tindahl) **Discontinue ROAR:** When cold read consistently is at expected reading level (the listening level or grade placement level, whichever is higher) and wpmc is within 10 wpmc of the expected reading level

GRADE LEVEL	WPMC	
	Hasbrouck & Tindahl 2017	Flynn, 2006 Midwestern norms
1st	60	55
2nd	100	102

Flynn, J., Deering W., Goldstein, M., and Rahbar, M. (1992). Electrophysiological correlates of dyslexic subtypes. *Journal of Learning Disabilities. 25*, 133-141.

Flynn, J., and Boder, E. (1991). Clinical and electrophysiological correlates of dysphonetic and dyseidetic dyslexia. In J.F. Stein (Ed.). *Vision and Visual Dyslexia*. Volume 13. Basingstoke: The MacMillan Press, Ltd., 121-131.

Lyon, G.R., and Flynn, J. (1991). Educational validation studies with subtypes of learning disabled readers. In B.P. Rourke (Ed.). *Neuropsychological Validation of Learning Disability Subtypes*. New York: Guilford Press, 223-242.

- ITA intervention resulted in higher achievement in traditional reading materials.
  http://itafoundation.org/effectiveness/research/

3rd	112	117
4th	133	127
5th	146	134
6th	146	150
7th		160
8th		171

Comprehension

Qualitative Reading Inventory (QRI-6)

- Comprehension instructional level

Reading Powers

    Narrative Powers

    Nonfiction Reading Powers

Story Grammar Plot, other Narrative Semantic Maps

QuickReads Fluency and Become and Expert Libraries (2nd-6th grade levels)

The National Reading Panel (2000) pp. 4-44 to 4-115)

Instruction in the following skills improves comprehension

- Question answering 17 studies
- Question generation 27 studies
- Story Structure 17 studies
- Graphic Organizers
- Cooperative learning strategies
- Metacognitive strategies

WWC: Improving Adolescent Literacy: Effective Classroom and Intervention Practices

Recommendation 3. Provide opportunities for extended discussion of text meaning and interpretation. Level of evidence: Moderate

NAEP indicates that 8th graders who read at the proficient level should be able to:

- ❏ summarize major ideas,
- ❏ provide evidence in support of an argument,
- ❏ analyze and interpret implicit causal relations
- ❏ analyze character motivation
- ❏ make inferences
- ❏ identify similarities across texts

	Newsela (on-line) **ReQuest** **Reciprocal Teaching** **Socratic Discussion** - **Q-A-R** (Question-Answer-Relationships)	Provide a task, or a discussion format, that students can follow when they discuss texts together in small groups. For example, assign students to read selections together and practice using the comprehension strategies that have been taught and demonstrated. In these groups students can take turns playing various roles, such as leading the discussion, predicting what the section might be about, identifying words that are confusing, and summarizing. As these roles are completed, other students can then respond with other predictions, other things that are confusing, or different ways of summarizing the main idea. (**Reciprocal Teaching**) Gillingan, E. Does Reciprocal Teaching Improve Comprehension of Nonfiction Text for Struggling and Proficient Readers? MLE Thesis, Saint Mary's University of Minnesota o Reciprocal Teaching resulted in significantly-greater achievement for struggling readers compared to average peers, although all benefited from the intervention	

[a] Effect Size (ES) of .50 or higher is EDUCATIONALLY important. ES of .50 = percentile gain of 19 points attributed to the intervention as opposed to regular classroom.