

Recommended Instructional Approaches

Introduction

This section of the toolkit describes the instructional approaches for dyslexia interventions that are recommended by Indiana Dyslexia Screening and Intervention Act¹. These approaches are used in instruction that is provided **in addition to** scientifically-based core reading instruction in general education. Instructional approaches are the methods and practices used to teach students content, not the content itself. In other words, instructional approaches provide teachers with guidance on **how** to deliver instruction to students, not **what** to teach. The Indiana Dyslexia Screening and Intervention Act¹ does not require schools to use a specific program, curriculum, or product for students who require dyslexia intervention; however, it does recommend that dyslexia interventions include instructional approaches that are:

- explicit and direct
- systematic and sequential
- cumulative
- individualized
- multisensory

These recommended approaches are *evidence-based*, which means they are supported by high-quality experimental research² and have led to improved reading and writing outcomes for all students, including those with and at risk for reading disabilities such as dyslexia^{3,4,5,6}. Additionally, these approaches are aligned with Structured Literacy, an approach recommended by the International Dyslexia Association⁷.

The recommended instructional approaches can be implemented in various settings including:

- general or special education settings,
- tiered systems of support (e.g., Response to Intervention [RTI], Multi-Tiered Systems of Support [MTSS]), and
- specially designed instruction.

Resources to support the use of these recommended approaches are available in the [Recommended Approaches Resources section](#) of this toolkit.

Explicit and Direct Instruction

Explicit and direct instructional approaches are fully-guided and structured teaching methods that incorporate specific procedures for selecting lesson content, designing lessons and practice opportunities, and delivering lessons to help students meet

specific learning goals^{8,9}. Table 1 lists these elements of explicit instruction. Explicit instruction is used when students are learning new skills and content (i.e., they are beginners) or when students have experienced difficulty in a content area^{8,10}. Explicit and direct instructional approaches are supported by decades of research and have led to positive outcomes in all academic areas¹¹. These methods do not require students to guess or imply what the teacher is trying to teach¹⁰. Archer and Hughes' (2010)⁸ definition of explicit instruction also incorporates the other instructional approaches (e.g., systematic, sequential, cumulative, diagnostic) recommended by the Dyslexia Screening and Intervention Act¹.

Table 1. Elements of Explicit Instruction

Content & Practice	Design Elements	Delivery Elements
<ul style="list-style-type: none"> ● include only the most important skills, vocabulary, concepts, and/or rules ● sequence skills logically ● break down complex skills into smaller steps ● frequent practice opportunities 	<ul style="list-style-type: none"> ● clearly stated lesson goals and relevance ● review of prerequisite skills ● models/step-by-step demonstrations ● guided practice ● clear and concise language 	<ul style="list-style-type: none"> ● multiple opportunities to respond ● monitoring of students' performance ● feedback ● pacing

Note. Adapted from Archer and Hughes (2010)⁸.

Systematic and Sequential

Instruction that is systematic is highly-structured⁸. Instruction that is sequential ensures that skills are sequenced logically (i.e., easier or prerequisite skills are taught before more difficult skills) and that each lesson builds upon previously taught skills⁸. For example, a scope and sequence for decoding skills would introduce single-syllable words (e.g., cat, list), before words with two or more syllables (e.g., oyster, giant). When lessons and interventions have a carefully planned scope and sequence, then this reduces the cognitive demands placed on students' working memory¹². In other words, teaching skills in small chunks and a predictable sequence allows students to focus on the most important information and helps them more fully process that information¹². Although most commercially-published curricula and programs have a scope and sequence, this dyslexia toolkit also includes a general scope and sequence for each of

the components of reading (e.g., phonological awareness, letter-sound correspondences, decoding).

Cumulative Review

Interventions for students with dyslexia should also incorporate frequent cumulative review, which involves reviewing previously learned skills, in addition to new skills⁸. Cumulative review promotes maintenance or retention of skills over time¹³. In a dyslexia intervention, a teacher might have students review their previously learned letter-sound correspondences (e.g., ai, ay, t, ch, d) at the beginning of each lesson or at pre-determined intervals such as once or twice a week. Once a student has initially acquired a reading skill, then spacing out or distributing cumulative review practice sessions over that skill helps students maintain their skills over time¹³.

Individualized Instruction

Instruction is individualized when it is based on assessment data from various sources (e.g., dyslexia screeners, progress monitoring assessments, diagnostic assessments, classroom formative assessments). This data is used to determine a student's current level of achievement or performance (i.e., baseline), and then plan and adjust instruction to meet the needs of that student. For example, if assessment data show that a student has mastered decoding short vowels in single-syllable words, but has not yet mastered decoding long vowel patterns in single-syllable words, then the teacher would plan to begin new instruction on long vowel patterns. Additionally, teachers can conduct error analyses on assessments to determine where and why errors are occurring and plan instruction to address those errors.

Instruction can also be individualized when assessment data is used to adjust instruction or intensify interventions, a process known as *data-based individualization (DBI)*¹⁴. "DBI relies on the systematic and frequent collection and analysis of student-level data, modification of intervention components when those data indicate inadequate response, and use of teachers' clinical experience and judgment to individualize intervention" (National Center for Intensive Intervention, 2013, p. 3). The changes made to instruction can be quantitative or qualitative. Table 2 lists examples of quantitative and qualitative changes to instruction that can be made using a DBI process.

Table 2. Qualitative and Quantitative Changes in Data-Based Individualization

Quantitative Changes	Qualitative Changes
<ul style="list-style-type: none"> ● reduced group size ● additional intervention time (e.g., more days per week, more time per session) ● different setting 	<ul style="list-style-type: none"> ● selection of examples specifically tailored to students' needs ● additional practice opportunities ● feedback and error correction

Note. Adapted from National Center for Intensive Intervention's [Data-Based Individualization: A Framework for Intensive Intervention](#)¹⁴.

Quantitative Changes Example: A teacher is providing dyslexia intervention to a small group of first grade students three times per week. The teacher is currently teaching students to read consonant digraphs (e.g., sh, ch) in isolation and real words. The teacher realizes that two of the four students in the small group are having difficulty with consonant digraphs, even after receiving direct and explicit instruction. The teacher decides to work with those two students for two extra days (in addition to the three days they're already receiving). The teacher reduced the group size and increased the amount of instruction for the two students.

Qualitative Change Example: A teacher is providing dyslexia intervention to a small group of first grade students three times per week. The teacher is currently teaching students to read consonant digraphs (e.g., sh, ch) in isolation and real words. The teacher realizes that one student has not yet mastered the ch digraph, so teacher provides that student with additional practice reading just the ch digraph in words (a qualitative change) while the other students in the small group practice partner reading words that include all previously taught consonant digraphs.

Multisensory Elements and Maximizing Student Engagement

Dyslexia interventions should also incorporate multisensory elements that require students to engage with the lesson through more than one modality (auditory, kinesthetic, visual, tactile). Multisensory elements act as the “glue” that holds all of the other recommended approaches together and promote student engagement and interaction in a lesson. Dyslexia interventions may include multisensory elements such as clapping while saying sounds, using chips or counters to segment sounds, moving letter tiles to create words, etc. For example, when students are learning the letters of the alphabet, they would say the name of the letter, say the sound the letter makes, look at the letter, and trace the letter.

Interventions can also maximize students' engagement by incorporating frequent opportunities for students to respond during lessons^{8,15,16}. Teachers should provide

students with multiple opportunities to respond (OTR) throughout all parts of a lesson (e.g., modeling, guided practice, independent practice) because OTRs are associated with increased academic achievement and on-task behavior^{16,17,18}.

Table 3. Examples of Opportunities to Respond

Response Type	Examples
Verbal	<ul style="list-style-type: none"> ● choral responses ● partner responses ● group/team responses ● individual responses
Written	<ul style="list-style-type: none"> ● whiteboards ● sticky notes ● worksheets ● graph paper ● posters ● graphic organizers ● brainstorming ● warm-up activities or exit tickets
Kinesthetic	<ul style="list-style-type: none"> ● response cards ● touching/pointing ● acting out ● gestures ● hand signals ● highlighting/underlining
Technology	<ul style="list-style-type: none"> ● clickers or remote response systems/apps ● online quiz sites (Quizlet, Kahoot) ● plickers

Note. From Archer & Hughes (2010)⁸

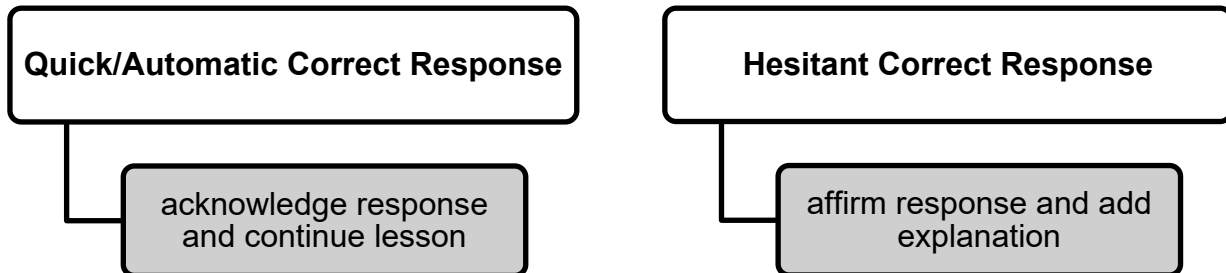
Teacher Feedback

Although teacher feedback is not stated in the Dyslexia Screening and Intervention Act¹, it is a critical element of instruction that is necessary for students' success. The purpose of teacher feedback is to increase students' motivation, engagement, and performance by affirming correct responses or correcting incorrect responses^{8,19,20}. Feedback should be:

- specific and goal directed,
- clear and tangible, and
- provided immediately (or as soon as possible) after the response.

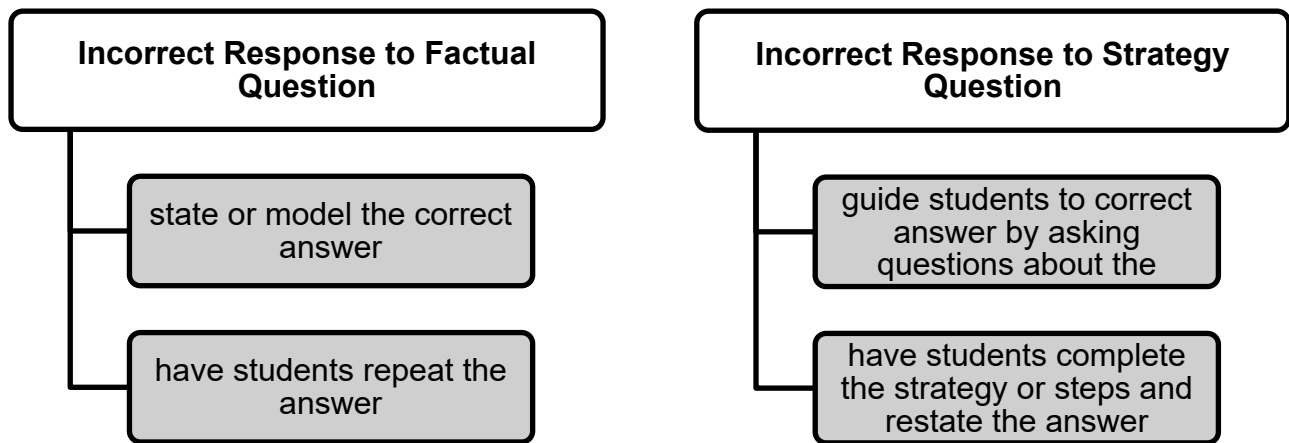
Figures 1 and 2 provide guidelines for how to provide affirmative and corrective feedback.

Figure 1. How to Provide Affirmative Feedback for Correct Responses



Note. Adapted from Archer & Hughes (2010)⁸

Figure 2. How to Provide Corrective Feedback



Note. Adapted from Archer & Hughes (2010)⁸

Resources to Support the Recommended Approaches

Additional resources to support the recommended approaches are available in the [Recommended Approaches Resources section](#) of this toolkit. These resources are not endorsed by the Indiana Department of Education or the Indiana University system.

References

1. Indiana Dyslexia Screening and Intervention Act, In. Stat. § 20-35.5 (2018).
<http://iga.in.gov/legislative/laws/2020/ic/titles/020/#20-35.5-2>
2. Every Student Succeeds Act., 20 U.S.C. § 6301 (2016).
<https://www.congress.gov/bill/114th-congress/senate-bill/1177>
3. Foorman, B., Beyler, N., Borradaile, K., Coyne, M., Denton, C. A., Dimino, J., Furgeson, J., Hayes, L., Henke, J., Justice, L., Keating, B., Lewis, W., Sattar, S., Streke, A., Wagner, R., & Wissel, S. (2016). *Foundational skills to support reading for understanding in kindergarten through 3rd grade* (NCEE 2016-4008). U.S. Department of Education, National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences.
<https://files.eric.ed.gov/fulltext/ED566956.pdf>
4. Gersten, R., Compton, D., Connor, C.M., Dimino, J., Santoro, L., Linan-Thompson, S., & Tilly, W. D. (2008). *Assisting students struggling with reading: Response to Intervention and multi-tier intervention for reading in the primary grades. A practice guide* (NCEE 2009-4045). U.S. Department of Education, National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences.
https://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/rti_reading_pg_021809.pdf
5. Wanzek, J., Stevens, E. A., Williams, K. J., Scammacca, N., Vaughn, S., & Sargent, K. (2018). Current evidence on the effects of intensive early reading interventions. *Journal of Learning Disabilities*, 51(6), 612-624.
<https://doi.org/10.1177/2F0022219418775110>
6. Wanzek, J., Vaughn, S., Scammacca, N., Gattlin, B., Walker, M. A., & Capin, P. (2016). Meta-analyses of the effects of tier 2 type reading interventions in grades K-3. *Educational Psychology Review*, 28, 551–576.
<https://doi.org/10.1007/s10648-015-9321-7>
7. International Dyslexia Association. (2019). *Structured literacy: An introductory guide*. <https://app.box.com/s/mvuvhel6qaj8tghvu1nl75i0ndnlp0yz>
8. Archer, A., & Hughes, C. (2011). Advanced Skills for school success module 1: school behaviors and organization skills (1st ed.). *The Guilford Press*.
9. Kirschner, P. A., Sweller, J., & Clarke, R. E. (2006). Why minimal guidance during instruction does not work: An analysis of the failure of constructivist discovery, problem-based, experiential, and inquiry-based teaching. *Educational Psychologist*, 41(2), 75-86. https://doi.org/10.1207/s15326985ep4102_1
10. Clark, R. E., Kirschner, P. A., & Sweller, J. (2012). Putting students on the path to learning: The case for fully guided instruction. *American Educator*.
<https://www.aft.org/sites/default/files/periodicals/Clark.pdf>
11. Stockard, J., Wood, T. W., Coughlin, C., & Khoury, C. R. (2018). The effectiveness of direct instruction curricula: A meta-analysis of a half century of

- research. *Review of Educational Research*, 88(4), 479–507. <https://doi.org/10.3102/0034654317751919>
12. Smith, J. L. M., Sáez, L., & Doabler, C. T. (2016). Using explicit and systematic instruction to support working memory. *Teaching Exceptional Children*, 48(6), 275–281. <https://doi.org/10.1177/0040059916650633>
 13. Hughes, C. A., & Lee, J.-Y. (2019). Effective approaches for scheduling and formatting practice: distributed, cumulative, and interleaved practice. *Teaching Exceptional Children*, 51(6), 411–423. <https://doi.org/10.1177/0040059919847194>
 14. National Center for Intensive Intervention. (2013, March). *Data-based individualization: A framework for intensive intervention*. U.S. Department of Education, Office of Special Education Programs. https://intensiveintervention.org/sites/default/files/DBI_Framework.pdf
 15. Cuticelli, M., Collier-Meek, M. A., & Coyne, M. D. (2016). Increasing the quality of tier 1 reading instruction: Using performance feedback to increase opportunities to respond during implementation of a core reading program. *Psychology in the Schools*, 53(1), 89-105. <https://doi.org/10.1002/pits.21884>
 16. Haydon, T., Macsuga-Gabe, A. S., Simonsen, B., & Hawkins, R. (2012). Opportunities to respond: A key component of effective instruction. *Beyond Behavior*, 22(1), 23-31. <https://doi.org/10.1177/2F107429561202200105>
 17. Sutherland, K. S. , & Wehby, J. H. (2001). Exploring the relationship between increased opportunities to respond to academic requests and the academic and behavioral outcomes of students with EBD: A review. *Remedial and Special Education*, 22, 113–121. <https://doi.org/10.1177/2F074193250102200205>
 18. Wanzek, J., Roberts, G., & Al Otaiba, S. (2014). Academic responding during instruction and reading outcomes for kindergarten students at-risk for reading difficulties. *Reading and Writing*, 27, 55-78. <https://doi.org/10.1007/s11145-013-9433-8>
 19. Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81–112. <https://doi.org/10.3102/003465430298487>
 20. McLeskey, J., Barringer, M-D., Billingsley, B., Brownell, M., Jackson, D., Kennedy, M., Lewis, T., Maheady, L., Rodriguez, J., Scheeler, M. C., Winn, J., & Ziegler, D. (2017, January). *High-leverage practices in special education*. Council for Exceptional Children, CEEDAR Center. <https://cedar.education.ufl.edu/wp-content/uploads/2017/07/CEC-HLP-Web.pdf>