

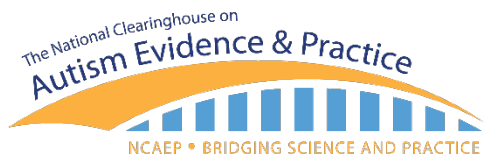


Autism Focused Intervention
Resources & Modules



EVIDENCE-BASED PRACTICE BRIEF PACKET: DIRECT INSTRUCTION

UNC Frank Porter Graham Child Development Institute
Autism Focused Intervention Resources & Modules
Rentschler, L., Sam, A., Waters, V., Dees, R., & AFIRM Team, 2022



---Overview of Content---

1. **Table of DI Contents:** This list details the specific EBP resources that apply to Direct Instruction.
2. **What is DI:** A quick summary of salient features of Direct Instruction, including what it is, who it can be used with, what skills it has been used with, and settings for instruction.
3. **Evidence-base:** The evidence-base details the National Clearinghouse on Autism Evidence and Practice (NCAEP) criteria for inclusion as an evidence-based practice and the specific studies that meet the criteria for Direct Instruction.
4. **Planning Checklist:** This checklist details the steps for planning for Direct Instruction, including what prerequisite learning of practices are needed, collecting baseline data of the target goal/behavior/skill if needed, and what materials/resources are needed.
5. **Other Resources:** Other resources may include decision trees, checklists, and/or template forms that will support the use of Direct Instruction.
6. **Step-by-Step Guide:** Use this guide as an outline for how to plan for, use, and monitor Direct Instruction. Each step includes a brief description as a helpful reminder while learning the process.
7. **Implementation Checklist:** Use this checklist to determine if Direct Instruction is being implemented as intended.
8. **Data Collection Form(s):** Use this form as a method for collecting and analyzing data to determine if the learner with autism is making progress towards the target goal/behavior/skill.
9. **Tip Sheet for Professionals:** Use this tip sheet, intended for professionals working with learners with autism, as a supplemental resource to help provide basic information about Direct Instruction.
10. **Parent Guide:** Use this guide intended for parents or family members of learners with autism to help them understand basic information about Direct Instruction and how it is being used with their child.
11. **Additional Resources:** This list provides additional information for learning more about Direct Instruction as well as resources.
12. **CEC Standards:** This list details the specific CEC standards that apply to Direct Instruction.
13. **Glossary:** This glossary contains key terms that apply specifically to Direct Instruction.
14. **References:** This list details the specific references used for developing this DI module in numerical order.



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---Direct Instruction---

DI

WHAT IS DI?

Direct Instruction (DI) is a teaching model and accompanying curricula for supporting learners in mastering language, reading, math, and other academic subjects. Instructors follow carefully developed scripted lessons to present instructional content in a clear and consistent manner on each learner's current skill level. The pace of the instruction is quick, and the specificity of the lessons decreases students' confusion or misinterpretations.

EVIDENCE-BASE:

Based upon the 2020 systematic review conducted by the National Clearinghouse on Autism Evidence and Practice (NCAEP), direct instruction is a focused intervention that meets the evidence-based practice criteria with 7 single case design and 1 group design study. This practice has been effective for preschoolers (3-5 years), elementary school learners (6-11 years), middle school learners (12-14 years), and high schoolers (15-18 years) with autism. Studies included the 2020 EBP report (Steinbrenner et al., 2020) detail how this practice can be used to effectively address the following outcomes for a target goal/behavior/skill: academic/pre-academic, cognitive, and communication.

HOW IS THIS DI BEING USED?

DI can be used by a variety of professionals, including teachers, special educators, therapists, paraprofessionals, and early interventionists in educational and community-based settings.

DISCLAIMER:

This module is not intended to replace the Direct Instruction training, but rather, to introduce basic knowledge of DI as an evidence-based practice for learners with autism.

Suggested Citation:

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<https://afirm.fpg.unc.edu/direct-instruction>



---Evidence-base---



The National Clearinghouse on Autism Evidence and Practice has adopted the following criteria to determine if a practice is evidence-based. The 2020 EBP report (Steinbrenner et al., 2020) provides more information about the systematic review process.

Efficacy must be established through high-quality, peer-reviewed research in scientific journals using:

- At least 2 randomized or quasi-experimental group design studies, or
- At least 5 single subject/case design studies, or a
- Combination of evidence of 1 randomized or quasi-experimental group design study **and** 3 single subject/case design studies

OVERVIEW:

Based upon the 2020 systematic review conducted by the National Clearinghouse on Autism Evidence and Practice (NCAEP), direct instruction is a focused intervention that meets the evidence-based practice criteria with 7 single case design and 1 group design study. This practice has been effective for preschoolers (3-5 years), elementary school learners (6-11 years), middle school learners (12-14 years), and high schoolers (15-18 years) with autism. Studies included the 2020 EBP report (Steinbrenner et al., 2020) detail how this practice can be used to effectively address the following outcomes for a target goal/behavior/skill: academic/pre-academic, cognitive, communication, and school-readiness.

In the table below, the instructional outcomes identified by the evidence base are shown by age of participants.

EVIDENCE-BASE:				
	ACADEMIC	COGNITIVE	COMMUNICATION	SCHOOL READINESS
3-5	Yes		Yes	
6-11	Yes	Yes	Yes	Yes
12-14		Yes	Yes	Yes
15-18			Yes	



EARLY INTERVENTION (0-2 YEARS):

No studies as of the 2020 EBP Report

PRESCHOOL (3-5 YEARS):

Flores, M. M., Schweck, K. B., & Hinton, V. (2016). Teaching language skills to preschool students with developmental delays and autism spectrum disorder using language for learning. *Rural Special Education Quarterly*, 35(1), 3-12.

<https://doi.org/10.1177/875687051603500102>

*Kamps, D., Heitzman-Powell, L., Rosenberg, N., Mason, R., Schwartz, I., Romine, & Swinburne, R. (2016). Effects of reading mastery as a small group intervention for young children with ASD. *Journal of Developmental and Physical Disabilities*, 28(5), 703-722. <https://doi.org/10.1007/s10882-016-9503-3>

*Wolfe, K., Blankenship, A., & Rispoli, M. (2017). Generalization of skills acquired in language for learning by young children with autism spectrum disorder. *Journal of Developmental and Physical Disabilities*, 30(1), 1-16. <https://doi.org/10.1007/s10882-017-9572-y>

ELEMENTARY SCHOOL (6-11 YEARS):

Crowley, K., McLaughlin, T., & Kahn, R. (2013). Using direct instruction flashcards and reading racetracks to improve sight word recognition of two elementary students with autism. *Journal of Developmental and Physical Disabilities*, 25(3), 297-311. <https://doi.org/10.1007/s10882-012-9307-z>

*Flores, M. M., & Ganz, J. B. (2007). Effectiveness of direct instruction for teaching statement inference, use of facts, and analogies to students with developmental disabilities and reading delays. *Focus on Autism and Other Developmental Disabilities*, 22(4), 244-251. <https://doi.org/10.1177/10883576070220040601>

Ganz, J. B., & Flores, M. M. (2009). The effectiveness of direct instruction for teaching language to children with autism spectrum disorders: Identifying materials. *Journal of Autism and Developmental Disorders*, 39(1), 75-83. <https://doi.org/10.1007/s10803-008-0602-6>



ELEMENTARY SCHOOL (6-11 YEARS; CONTINUED):

*Kamps, D., Heitzman-Powell, L., Rosenberg, N., Mason, R., Schwartz, I., Romine, & Swinburne, R. (2016). Effects of reading mastery as a small group intervention for young children with ASD. *Journal of Developmental and Physical Disabilities, 28*(5), 703-722. <https://doi.org/10.1007/s10882-016-9503-3>

Thompson, J. L., Wood, C. L., Test, D. W., & Cease-Cook, J. (2012). Effects of direct instruction on telling time by students with autism. *Journal of Direct Instruction, 12*, 1-12.

*Wolfe, K., Blankenship, A., & Rispoli, M. (2017). Generalization of skills acquired in language for learning by young children with autism spectrum disorder. *Journal of Developmental and Physical Disabilities, 30*(1), 1-16. <https://doi.org/10.1007/s10882-017-9572-y>

MIDDLE SCHOOL (12-14 YEARS):

*Flores, M. M., & Ganz, J. B. (2007). Effectiveness of direct instruction for teaching statement inference, use of facts, and analogies to students with developmental disabilities and reading delays. *Focus on Autism and Other Developmental Disabilities, 22*(4), 244-251. <https://doi.org/10.1177/10883576070220040601>

HIGH SCHOOL (15-18 YEARS):

Cadette, J. N., Wilson, C. L., Brady, M. P., Dukes, C., & Bennett, K. D. (2016). The effectiveness of direct instruction in teaching students with autism spectrum disorder to answer "Wh-" questions. *Journal of Autism and Developmental Disorders, 46*(9), 2968-2978. <https://doi.org/10.1007/s10803-016-2825-2>

YOUNG ADULT (19-22 YEARS):

No studies as of the 2020 EBP Report

Note: * denotes the study has participants in at least two age ranges; **new studies since 2011 (2012 till 2017) are denoted in bold**



---Daily Schedule---



Learner's Name: _____ **Date/Time:** _____

Observer(s): _____

Target Goal/Behavior/Skill: _____

Directions: Use this form to create a daily schedule for the learner or to help you plan for using this evidence-based practice.

Time	Monday	Tuesday	Wednesday	Thursday	Friday



---Planning Checklist---



Learner's Name: _____ Date/Time: _____

Observer(s): _____

Target Goal/Behavior/Skill (short): _____

Directions: Complete this checklist to determine if this is an appropriate practice to use with the learner with autism as well as if Direct Instruction is ready to be implemented.

GENERAL PLANNING:

1. Has the target goal/behavior/skill been identified?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. Has baseline data and/or a functional behavior assessment been collected through direct observation of the learner?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3. Is the target goal/behavior/skill measurable and observable? Does it clearly state what the target goal/behavior/skill is, when it will occur, and how team members/observers will know it has been mastered?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4. Is this selected practice appropriate for the learner's target goal/behavior/skill?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5. Does the learner have needed prerequisite skills/abilities?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
6. Does the learner require additional adaptations/modifications/supports? Such as visual supports or a communication device?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
7. Have reinforcers/rewards for the learner been identified based on the learner's interests/preferred items and/or activities?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
8. Are additional materials and/or resources for using this selected practice ready and available?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

TARGET GOAL/BEHAVIOR/SKILL:



DI SPECIFIC PLANNING:

1. Received DI training?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. Conducted learner placement assessments and select DI levels?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3. Purchased DI materials?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4. Practiced DI session level(s)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5. Scheduled ongoing practice and student progress monitoring time?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

DAILY SCHEDULE

Time	Monday	Tuesday	Wednesday	Thursday	Friday



IDENTIFY ADDITIONAL EBPS TO BE USED WITH DI:		
<input type="checkbox"/> Reinforcement (R+)	<input type="checkbox"/> Prompting (PP)	<input type="checkbox"/> Modeling (MD)
<input type="checkbox"/> Visual Supports (VS)	<input type="checkbox"/> _____	<input type="checkbox"/> _____

PREFERRED REINFORCERS:

MATERIALS:		
1. Individual DI plan and data collection forms are ready and available?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. Materials for DI are ready and available?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3. Organized instructional space?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

---Decision Tree---

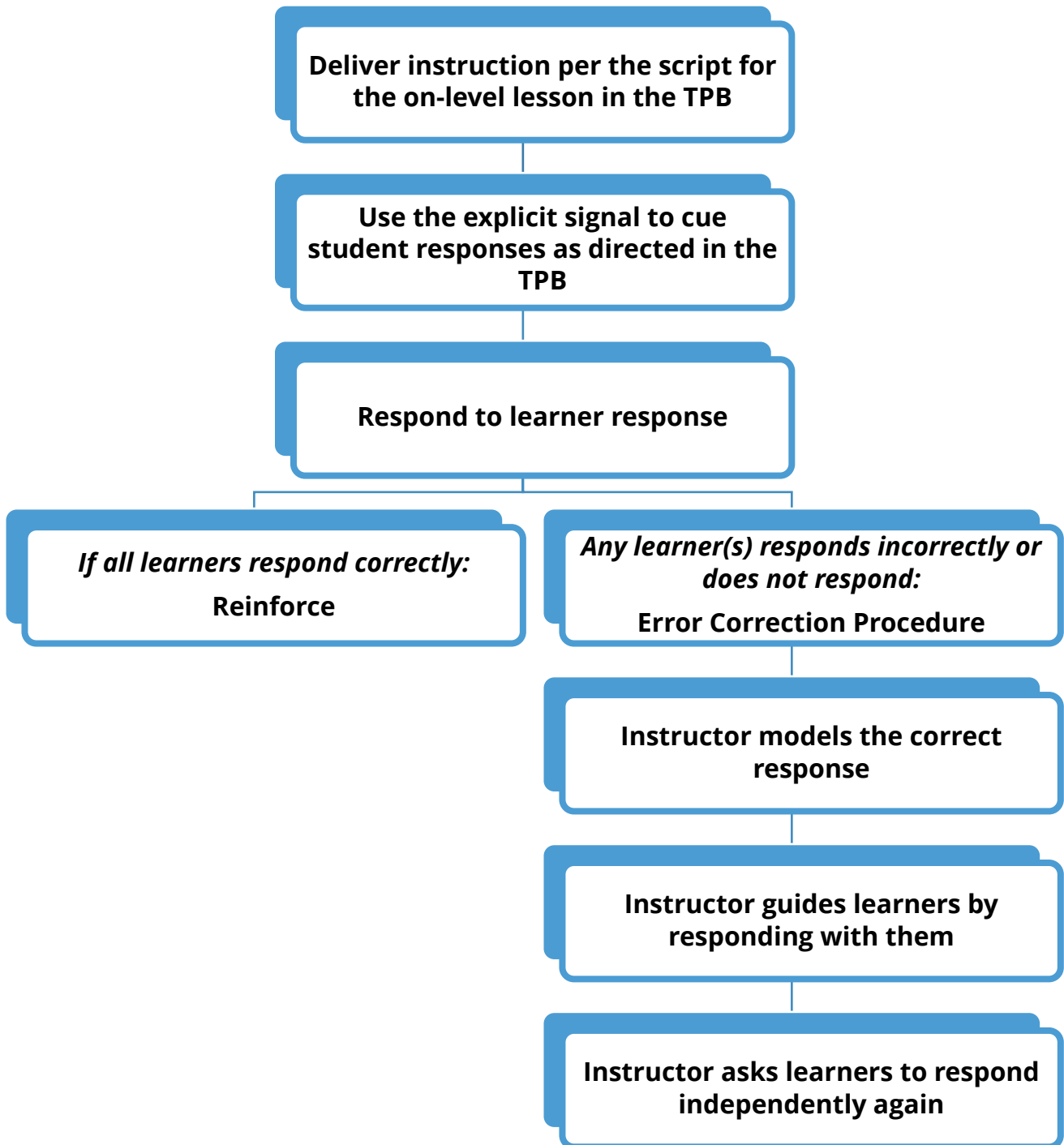


Learner's Name: _____ Date/Time: _____

Observer(s): _____

Target Goal/Behavior/Skill: _____

Directions: Use this decision tree for implementing DI with learners with autism.



---Step-by-Step Guide---

DI



This step-by-step practice guide outlines how to plan for, use, and monitor Direct Instruction.

BEFORE YOU BEGIN...

Each of the following points is important to address so that you can be sure this selected evidence-based practice is likely to address the target goal/behavior/skill of your learner with autism.

HAVE YOU FOUND OUT MORE INFORMATION ABOUT...?

- Identifying the target goal/behavior/skill...?
- Collecting baseline data through direct observation...?
- Establishing a target goal or outcome that clearly states when the behavior will occur, what the target goal or outcome is, and how team members and/or observers will know when the skill is mastered...?

If the answer to any of the above questions is 'No,' review the process of how to select an appropriate DI (<https://afirm.fpg.unc.edu/selecting-EBP>).

For more information about this selected evidence-based practice, please visit <https://afirm.fpg.unc.edu/>.

Keep in mind that this selected practice can be used to increase language, reading, and/or math skills for learners with autism.

STEP 1: PLANNING FOR DI

The planning step details the initial steps and considerations involved to prepare for using this practice with a learner with autism.

1.1 Receive initial DI training

Obtaining formal training in DI is necessary because the teaching procedures are highly specialized.

- Visit the National Institute for Direct Instructions (NIFDI) website: www.nifdi.org.
- Visiting a model DI school can be helpful.
- Arrange with NIFDI for live training through in-services, training events and coaching sessions.

1.2 Conduct student placement assessments

After completing initial training, team members should assess learners for placement in specific levels of DI programs.

- Learners are placed in instructional groups based on assessment outcomes.
- Ideally, placement tests are conducted at the end of the current school year.
- Conduct placement tests prior to ordering any curriculum materials.

1.3 Prepare for the appropriate DI level(s)

Before beginning to implement DI, preparations for the specific levels your team will implement are necessary.

- Purchase curriculum materials.
- Obtain training on the specific DI levels to be taught.

1.4 Organize DI learning groups

Learners need to be organized into learning groups based on the results of their placement tests. Groups are fluid as learners may move to a different instructional group based on their progress.

1.5 Create daily DI schedule

Scheduling sufficient instructional time for DI is crucial for efficacy. Curriculum materials provide guidelines for scheduling across instructional areas.

- 📄 *Use the Daily Schedule form to create a Direct Instruction daily schedule for learners.*

STEP 1: PLANNING FOR DI (CONTINUED)

1.6 Plan for reinforcement

While DI should become naturally reinforcing as learners experience success with learning, including additional reinforcement during DI time is also important.

- Learner success should be naturally reinforcing.
- DI suggests the use of social praise for correct responding.
- DI also suggests a reinforcing game for working hard, staying on-task, and following directions.
- Alternative reinforcers may be paired with the above strategies to provide more immediate tangible reinforcers.

1.7 Organize session materials and set-up instructional space

Familiarize yourself with the various components of the curriculum materials. The Teacher Presentation Books (TPB) is a critical component that provides scripted lessons for the instructor.

Select an instructional space based on the size of your learner group. Other needed materials may include a whiteboard/chalkboard, projector, and/or smartboard. Be sure that every student has a clear sightline to the instructor, presentation book, and board (if applicable).

1.8 Practice the script for the first lesson as outlined in the Teacher Presentation Book

All instructors should spend 10-15 minutes practicing the next day's lesson in the TPB every day, ideally with another instructor. Follow the NIFDI advised key components related to the presentation of the lessons and responses to learners.

- 📄 *Use the Planning Checklist to determine if ready to use DI.*

STEP 2: USING DI

This step details the process of implementing this practice with a learner with autism.

2.1 Follow the TPB for implementing DI

Each DI program comes with Teacher Presentation Books (TPB). The leveled lessons with accompanying scripts can be found in the TPBs.

2.1a Deliver instruction per the script for the on-level lesson in the TPB

Scripts are color-coded and also note words for instructors to emphasize during lessons.

- Use the explicit signal to cue student responses as directed in the TPB
 - Respond to learner's response:
 - *If learner responds correctly:* Provide reinforcement
 - *If learner responds incorrectly or does not respond, use the following procedure:*
 - Model the correct response
 - Guide the students by responding with them
 - Ask students to respond independently again
- 📄 *Use the Decision Tree for implementing DI with learners with autism.*

2.2 Implement Mastery Tests as indicated by the DI program

Mastery Tests are given to students every 5-10 lessons, depending on the program and level. Data from these tests provide information on whether lessons should be revisited or if a learner should switch to a different instructional group.

STEP 3: MONITORING DI

The following step details how to monitor the use of this practice with a learner with autism and how to determine next steps based on the data.

3.1 Collect and analyze data

DI data are collected in several ways:

- Observation of student performance during lessons
- Lesson Progress Chart
- Student Test Summary Chart
- Progress on independent work (for older students)

3.2 Weekly review of collected data

All collected data should be reviewed weekly by the team. Learners should achieve high rates of correct responding (70% of new material and 90% of previously mastered material) during each lesson.

3.3 Conduct weekly training and practice sessions for all team members

Implementation fidelity is key to student outcomes; therefore, instructional teams should review their fidelity to the instructional model weekly. On-going training and practice sessions are necessary for all instructors.

3.4 Determine next steps based on learner progress

Collecting data will help team members decide about the effectiveness of using this practice and whether the learner with autism is making progress. If a learner is making progress based upon data collected, team members should continue to use the selected strategies.

If team members determine that the learner is not making progress, consider the following:

- Have you received DI training or is additional training needed?
- Is the learner's instructional group placement appropriate?
- Has enough time been devoted to implementing DI daily?
- Was DI implemented with fidelity (see Implementation Checklist)?
- Does the learner need additional supports?
- Are the selected reinforcers preferred items/activities of the learner?

If these issues have been addressed and the learner with autism continues not to show progress, consider selecting a different evidence-based practice to use with the learner with autism.



---Implementation Checklist---

		Observation:				
		1	2	3	4	5
		Date:				
		Observer's initials:				
<p>Before you start, have you...?</p> <p><input type="checkbox"/> Identified the target goal/behavior/skill...?</p> <p><input type="checkbox"/> Collected baseline data through direct observation...?</p> <p><input type="checkbox"/> Established a target goal or outcome that clearly states when the behavior will occur, what the target goal or outcome is, and how team members and/or observers will know when the skill is mastered...?</p> <p>If the answer to any of the above questions is 'No,' review the process of how to select an EBP.</p>	STEP 1: PLANNING					
	1.1	Receive initial DI training				
	1.2	Conduct student placement assessments				
	1.3	Prepare for the appropriate DI level(s)				
	1.3a	Purchase curriculum materials				
	1.3b	Obtain training on the specific DI levels to be taught				
	1.4	Organize DI learning groups				
	1.5	Create daily DI schedule				
	1.6	Plan for reinforcement				
	1.7	Organize session materials and set-up instructional space				
	1.8	Practice the script for the first lesson as outlined in the 'Teacher Presentation Book' (TPB)				
	STEP 2: USING					
	2.1	Follow the TPB for implementing DI instruction:				
	2.1a	Deliver instruction per the script for the on-level lesson in the TPB				
	2.1b	Use the explicit signal to cue student responses as directed in the TPB				
	2.1c	Respond to learner's response:				
	2.1c.i	<i>If learner responds correctly:</i>				
	2.1c.i.1	Provide reinforcement				
	2.1c.ii	<i>If learner responds incorrectly or does not respond, use the following correction procedure:</i>				
	2.1c.ii.1	Model the correct response				
2.1c.ii.2	Guide the students by responding with them					
2.1c.ii.3	Ask students to respond independently again					
2.2	Implement Mastery Tests as indicated by the DI program					
STEP 3: MONITORING						
3.1	Collect data					
3.2	Weekly review of collected data					
3.3	Conduct weekly training and practice sessions for all team members					
3.4	Determine next steps based on learner progress					

---Tip Sheet for Professionals---



DIRECT INSTRUCTION IS...

- A teaching model and accompanying curricula for instruction on language, reading, math, and other academic subjects.
- Used to increase a target goal/behavior/skill such as language, reading, and/or math.

WHY USE WITH LEARNERS WITH AUTISM?

- DI streamlines the rules and concepts in academic subjects to present content in manageable chunks.
- DI supports learners in gaining important foundational knowledge prior to the introduction of new concepts.
- DI can improve academic outcomes and build the self-confidence of learners.



TIPS:

- Tip 1: Receive initial DI training before using DI.
- Tip 2: Conduct Placement Assessments to determine instructional groups.
- Tip 3: Create a daily DI schedule to ensure sufficient instructional time.

INSTRUCTIONAL OUTCOMES:

- The evidence-base for Direct Instruction supports its use to address the following outcomes, according to age range, in the table below:

EVIDENCE-BASE:				
	ACADEMIC	COGNITIVE	COMMUNICATION	SCHOOL READINESS
3-5	Yes		Yes	
6-11	Yes	Yes	Yes	Yes
12-14		Yes	Yes	Yes
15-18			Yes	

STEPS FOR IMPLEMENTING:

1. PLAN

- Receive initial DI training
- Conduct student placement assessments
- Prepare for the appropriate DI level(s)
- Organize DI learning groups
- Create daily DI schedule
- Plan for reinforcement
- Organize session materials and set-up instructional space
- Practice the script for the first lesson as outlined in TPB

2. USE

- Follow the TPB for implementing DI
- Implement Mastery Tests as indicated by the DI program

3. MONITOR

- Collect data and analyze data
- Weekly review of collected data
- Conduct weekly training and practice sessions for all team members
- Determine next steps based on learner progress



Direct Instruction (DI)

This sheet was designed as a supplemental resource to provide basic information about this evidence-based practice for professionals working with learners with autism.

For more information about this selected evidence-based practice, please visit <https://afirm.fpg.unc.edu/>.

---Parent's Guide---



Direct Instruction DI

This parent introduction to DI was designed as a supplemental resource to help answer questions about this practice.

To find out more about how this DI is being used with your child, please talk with:

For more information about this selected evidence-based practice, please visit <https://afirm.fpg.unc.edu/>.

WHAT IS DI?

- DI is a teacher-directed model of instruction on language, reading, math, and other academic subjects.
- DI programs include Language for Learning, Language for Thinking, Reading Mastery, Spelling Mastery, Horizons and Connecting Math Concepts among others.
- DI is used to increase a target goal/behavior/skill such as language, reading, and/or math.

WHY USE DI WITH MY CHILD?

- DI targets content to the learner's current skill level.
- DI provides clear content, repetition and ensures mastery before new content is introduced.
- Learning becomes reinforcing as students experience success.

WHAT ACTIVITIES CAN I DO AT HOME?

- *Funnix Reading* is a computer-based program that teaches reading skills including decoding, fluency, vocabulary, and comprehension.
- *Funnix Math* is a computer-based program for teaching early math skills such as counting and beginning math operations.
- *Teach Your Child to Read in 100 Easy Lessons* provides resources for step-by-step reading instruction.




---Additional Resources---



Check out these resources, applications, books, and websites, to support your use of this evidence-based practice.

For more information about this selected evidence-based practice, please visit <https://afirm.fpg.unc.edu/>.

APPLICATIONS:

Developer	Available	Pricing
 Funnix, LLC	<i>Funnix Reading and Math</i>	Starts at \$24.99/mo.

BOOKS:

Adams, G., & Engelmann, S. (1996). *Research on Direct Instruction: 25 years beyond DISTAR*. Educational Achievement Systems.

Barbash, S. (2012). *Clear teaching: With Direct Instruction, Siegfried Engelmann discovered a better way of teaching*. Education Consumers Foundation.

Boxer, A., & Bennet, T. (Eds.). (2019). *The researchED guide to Direct Instruction: An evidence-informed guide for teachers*. John Catt Educational.

Engelmann, S., Haddox, P., & Bruner, E. (1986). *Teach your child to read in 100 easy lessons*. Touchstone.

WEBSITES:

Funnix. (2021). <https://www.funnix.com/>

McGraw Hill Education. (2022). *Direct Instruction*. <https://www.mheducation.com/prek-12/explore/direct-instruction.html>

National Institute for Direct Instruction. (2015). <https://www.nifdi.org/>

Siegfried (Zig) Engelmann and Direct Instruction. (2012). <https://www.zigsite.com/>

Voyager Sopris Learning. (2022). <https://www.voyagersopris.com/>



---CEC Standards---



The CEC Standards that apply to all evidence-based practices can be found on our website at <https://afirm.fpg.unc.edu/>.

Below are the CEC Standards that apply specifically to Direct Instruction (DI).

Initial Practice-Based Standards for Early Interventionists/Early Childhood (0-5 years; CEC, 2020)

STANDARD 4: ASSESSMENT PROCESSES

- 4.2 Develop and administer informal assessments and/or select and use valid, reliable formal assessments using evidence-based practices, including technology, in partnership with families and other professionals.
- 4.4 Candidates, in collaboration with families and other team members, use assessment data to determine eligibility, develop child and family-based outcomes/goals, plan for interventions and instruction, and monitor progress to determine efficacy of programming.

STANDARD 5: APPLICATION OF CURRICULUM FRAMEWORKS IN THE PLANNING OF MEANINGFUL LEARNING EXPERIENCE

- 5.1 Collaborate with families and other professionals in identifying an evidence-based curriculum addressing developmental and content domains to design and facilitate meaningful and culturally responsive learning experiences that support the unique abilities and needs of all children and families.

STANDARD 6: USING RESPONSIVE AND RECIPROCAL INTERACTIONS, INTERVENTIONS, AND INSTRUCTION

- 6.1 In partnership with families, identify systematic, responsive, and intentional evidence-based practices and use such practices with fidelity to support young children’s learning and development across all developmental and academic content domains.
- 6.3 Engage in ongoing planning and use flexible and embedded instructional and environmental arrangements and appropriate materials to support the use of interactions, interventions, and instruction addressing developmental and academic content domains, which are adapted to meet the needs of each and every child and their family.
- 6.4 Promote young children’s social and emotional competence and communication, and proactively plan and implement function-based interventions to prevent and address challenging behaviors.



STANDARD 6: USING RESPONSIVE AND RECIPROCAL INTERACTIONS, INTERVENTIONS, AND INSTRUCTION (CONTINUED)

6.7 Plan for, adapt, and improve approaches to interactions, interventions, and instruction based on multiple sources of data across a range of natural environments and inclusive settings.

STANDARD 7: PROFESSIONALISM AND ETHICAL PRACTICE

7.2 Engage in ongoing reflective practice and access evidence-based information to improve own practices.

Initial Practice-Based Standards for (grades K-12; CEC, 2020)

STANDARD 2: UNDERSTANDING AND ADDRESSING EACH INDIVIDUAL'S DEVELOPMENTAL AND LEARNING NEEDS

2.1 Apply understanding of human growth and development to create developmentally appropriate and meaningful learning experiences that address individualized strengths and needs of students with exceptionalities.

STANDARD 4: USING ASSESSMENT TO UNDERSTAND THE LEARNER AND THE LEARNING ENVIRONMENT FOR DATA-BASED DECISION MAKING

4.1 Collaboratively develop, select, administer, analyze, and interpret multiple measures of student learning, behavior, and the classroom environment to evaluate and support classroom and school-based systems of intervention for students with and without exceptionalities.

4.3 Assess, collaboratively analyze, interpret, and communicate students' progress toward measurable outcomes using technology as appropriate, to inform both short- and long-term planning, and make ongoing adjustments to instruction.

STANDARD 5: SUPPORTING LEARNING USING EFFECTIVE INSTRUCTION

5.2 Use effective strategies to promote active student engagement, increase student motivation, increase opportunities to respond, and enhance self-regulation of student learning.

5.3 Use explicit, systematic instruction to teach content, strategies, and skills to make clear what a learner needs to do or think about while learning.

5.4 Candidates use flexible grouping to support the use of instruction that is adapted to meet the needs of each individual and group.

5.5 Plan and deliver specialized, individualized instruction that is used to meet the learning needs of each individual.



STANDARD 6: SUPPORTING SOCIAL, EMOTIONAL, AND BEHAVIORAL GROWTH

6.2 Use a range of preventive and responsive practices documented as effective to support individuals' social, emotional, and education well-being.

Advanced Practice-Based Standards (CEC, 2012)

STANDARD 1: ASSESSMENT

1.2 Design and implement assessments to evaluate the effectiveness of practices and programs.

STANDARD 2: CURRICULAR CONTENT KNOWLEDGE

2.2 Continuously broaden and deepen professional knowledge and expand expertise with instructional technologies, curriculum standards, effective teaching strategies, and assistive technologies to support access to and learning of challenging content.

STANDARD 3: PROGRAMS, SERVICES, AND OUTCOMES

3.1 Design and implement evaluation activities to improve programs, supports, and services for individuals with exceptionalities.

3.4 Use instructional and assistive technologies to improve programs, supports, and services for individuals with exceptionalities.

STANDARD 7: COLLABORATION

7.2 Special education specialists use collaborative skills to improve programs, services, and outcomes for individuals with exceptionalities.

---Glossary---

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Below are the key terms that apply specifically to this evidence-based practice.

For more information about this selected evidence-based practice, please visit <https://afirm.fpg.unc.edu/>.

Baseline data

information gathered from multiple sources to better understand the target behavior, before using an intervention or practice; data collected on current performance level prior to implementation of intervention

Cue

a clear signal to the learner to perform a target skill, may be auditory, visual or both

Direct Instruction

an evidence-based practice that involves teaching scripted lessons at the group's learning level

Error correction

a procedure for responding to correct a learner's incorrect response

Fidelity

how well and how often the implementation steps for an evidence-based practice are followed

Implementation checklist

the specific steps needed to accurately follow an evidence-based practice.

Interfering behavior

is a challenging behavior that interferes with the learner's ability to learn

Modeling

an evidence-based practice that involves the learner observing someone correctly performing a target behavior



Prompting

an evidence-based practice that will assist the learner in using specific skills; prompts can be verbal, gestural, or physical

Reinforcement

an evidence-based practice that provides feedback that increases the use of a strategy or target behavior/skill

Token economy

a type of positive reinforcement where learners earn tokens which can be used to acquire desired reinforcers (known as backup reinforcers)

Team members

includes the parents, other primary caregivers, IEP/IFSP team members, teachers, therapists, early intervention providers, and other professionals involved in providing services for the learner with ASD

Visual Supports

an evidence-based practice that provides concrete cues that are paired with, or used in place of, a verbal cue to provide the learner with information about a routine, activity, behavioral expectation, or skill demonstration

---References---



Listed below, in numerical order, are the references used in the module.

For more information about this selected evidence-based practice, please visit <https://afirm.fpg.unc.edu/>.

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