

Designing Intensive Intervention for Students With Severe and Persistent Academic Needs

Presenter Name

Title/Affiliation

Date

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Welcome to the National Center on Intensive Intervention's (NCII) module on designing intensive intervention in academics. This module will take 4-6 hours to complete (possibly longer if teams choose to complete all optional activities). It includes slides, speakers' notes, optional activities, and a coaching guide.

This module is intended for individuals and teams who are interested in learning more about how to design and implement intensive intervention as a part of the Data-Based Individualization (DBI) process. For more information about the DBI process, see <http://www.intensiveintervention.org/resource/introduction-data-based-individualization>.

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Facilitators: Introduce yourself and provide a brief summary of your background before moving on.

Tips for using the speaker's notes:

- *Text formatted in standard font provides a sample script for the facilitator.*
- *Text formatted in **bold** is excerpted directly from the presentation slides.*
- *Text formatted in italics is intended as directions, notes, or background information for the facilitator.*

Session Learning Objectives

- Review research recommendations for intensifying academic intervention
- Discuss four categories of practices for intensification, and underlying elements
- Plan for intensive intervention with your students
- Plan for common barriers to implementation

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During today's session, our objectives are to....*(read or paraphrase bullets on slide)*.

Review research recommendations for intensifying academic intervention

Discuss four categories of practices for intensification, and underlying elements

Plan for intensive intervention with your students

Plan for common barriers to implementation

Agenda

- Overview and importance (15–20 minutes)
- Intensive intervention: What is it? (30 minutes)
- Practices for intensifying intervention (60–120 minutes)
- BREAK (10 minutes)
- Practices for intensifying intervention (60–120 minutes)
- Planning activities (45–60 minutes)
- Addressing barriers (15– 30 minutes)
- Closing (10 minutes)

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Times noted above are recommended estimates. Facilitators may want to change specific times to accommodate individual schedules. The module includes several practice activities. Facilitators should select activities based on participants' interests and needs.

Introductory Activity

- Groups of 2–4 people
- Identify the three most common things you do to make:
 - **Instruction** more intense when students need it.
 - **Intervention** more intense when students need it.
- Choose someone to report out to the group.

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In a group of 2-4 people, take a few minutes to identify the three most common things you (or others on your staff) do to make instruction/intervention *more intense* when students need it. Then, choose someone to report out to the large group

If you are new to the group, ask everyone to introduce themselves, including noting their professional role.

Circulate as teams discuss. After most groups appear to be ready (3-5 min), have each reporter share each team's items. Record their responses on a piece of chart paper or whiteboard to revisit at the end of the session. If teams note the same strategies, use tally marks to keep track of how often each strategy is noted.

Possible questions for teams:

1. What made you choose these things?
2. Why do you think they are used so often?
3. Are they working well for you? How can you tell?

Keep this activity to 10-12 minutes to allow sufficient time for other parts of the module. If needed, remind groups that there will be more time for discussion throughout the session.

Intensive Intervention

What Is It?

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What Intensive Intervention ...

Is

- *Individualized based on student needs*
- *More intense, often with substantively different content AND pedagogy*
- *Composed of more frequent and precise progress monitoring*

Is Not

- *A single approach*
- *A manual*
- *A pre-set program*
- *More of the same Tier 1 instruction*
- *More of the same Tier 2 instruction*

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Despite research on effective intervention programs for at-risk students (see <http://www.intensiveintervention.org/chart/instructional-intervention-tools> for examples), evidence suggests that these programs will be ineffective (or not sufficiently effective) for 3-5% of students. These students require more intensive, individualized levels of support.

Intensive intervention comprises the following characteristics... *Paraphrase the first box of the slide.*

- **Individualized based on student needs**
- **More intense, often with substantively different content AND pedagogy**
- **Comprised of more frequent and precise progress monitoring**

It is not... *Paraphrase second box.*

- **A single approach**
- **A manual**
- **A pre-set program**
- **More of the same Tier 1 instruction**
- **More of the same Tier 2 instruction**

In other words, intensive intervention isn't a program you can pull off the shelf or buy online. It's also not more of the same instruction. Rather, it's instruction that differs in terms of content and/or mode of delivery, often combined with increased learning

time or changes to the instructional setting. We'll talk more about these topics in the following sections of our session today.

Why is it important for schools to focus on intensive intervention?

<http://www.intensiveintervention.org/ask-the-expert/2013february> (2:27)

Dr. Sharon Vaughn

Senior Advisor to the National Center on Intensive Intervention and Executive Director of The Meadows Center for Preventing Educational Risk

University of Texas at Austin

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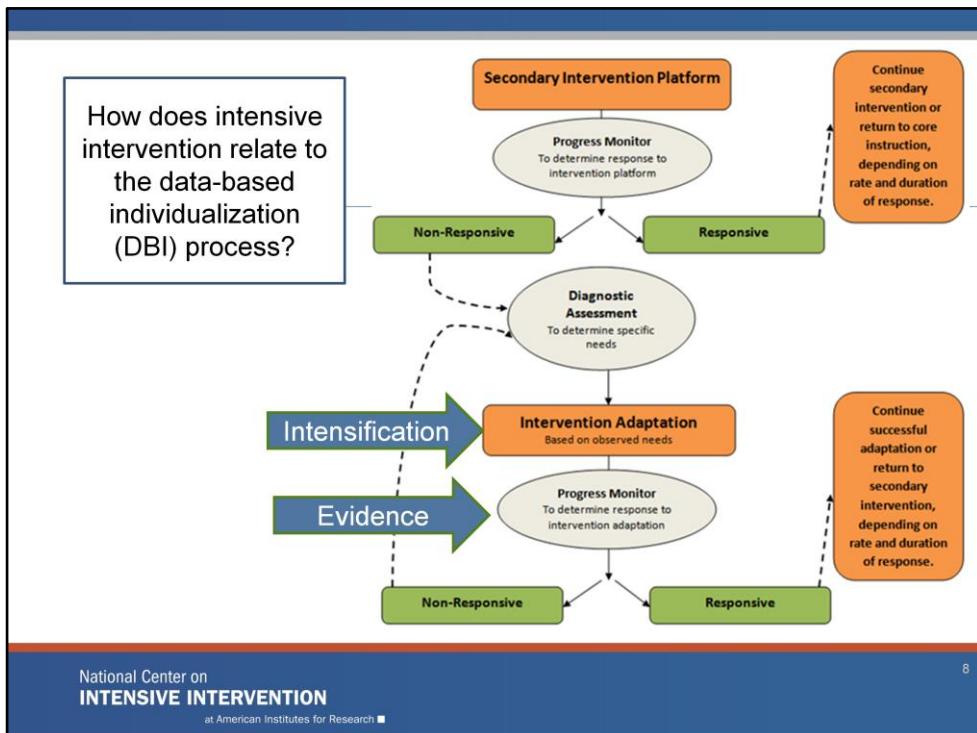
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Dr. Sharon Vaughn provides her perspective about why intensive intervention is important for schools. (See the transcript below if you do not have access to an internet connection to play the clip provided on the slide.)

Question: Why is it important for schools to focus on intensive interventions?

Answer: It's important for schools to focus on intensive interventions because it gives an opportunity for the schools to figure out ways to serve their neediest students. You might wonder even, what do we mean by an intensive intervention? The idea is really that if you have your core program, whether it's reading or math, or your sort of central school system approaches to behavior, then for those students for whom that is not enough, sufficient, you want to provide something supplemental. Whether it's in behavior or math or reading, and that gets increasingly intensive to respond to the instructional or behavioral needs of the students. So an intensive intervention is really viewed as an intervention that is the most specific for the students most in need. So that is important because otherwise what we are really saying as a society is that we believe in appropriate education for some students, not all students. So by providing intensive interventions, by organizing your school to address them, you are really embracing every student who comes to your school and you are saying no matter what their behavioral needs are, no matter what their instructional needs are; we are going to specify, articulate, and implement an appropriate intervention for that child. So that means a willingness to make modifications, a willingness to make adaptations, and a willingness to reflect on evidence-based decision making so that the kind of intensive intervention you provide is really specific to that student.



Adapting interventions to make them more intense lies at the heart of the data-based individualization (DBI) process. (*Review other elements of the graphic as needed.*) The strategies we'll discuss today provide you with methods for adapting your secondary intervention platforms when you find they are insufficient for specific students. As we'll also discuss, use of precise progress monitoring data (*note lower “Evidence” arrow*) to determine the impact of these instructional adaptations is also an essential part of effective intensive intervention. These data provide the evidence base to help teachers/teams determine whether or not the intervention program is effective for the individual student and when changes may be needed.

For a more complete overview of the DBI process, visit:
<http://www.intensiveintervention.org/resource/introduction-data-based-individualization>.

*“It all works out in the end.
... If it hasn’t worked out,
it’s not the end yet.”*

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This adage (unknown source) is relevant to the DBI process because it's about perseverance. DBI helps us find programs that work for our neediest students, even when our initial attempts are not successful. Insufficient progress means that we haven't found the right solution yet, not that we should stop trying to intervene. DBI helps us know when changes are needed, and allows us to inform those changes so that in the end, intervention works for the individual student.

What can we learn from research about intensive intervention?

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In this section we will review research findings from the Institute of Education Sciences (IES) practice guide and other evidence-based recommendations. Specifically, we will review the recommendations for reading and mathematics, and discuss ways to intensify interventions within four dimensions of intensifying intensive intervention.

What can we learn from the IES Practice Guide about Tier 3 (a.k.a. intensive intervention)?

- There is little empirical research demonstrating specific effective intervention programs for the lowest 3 percent to 5 percent of readers.
- Recommendations for intensive intervention were based on the expert opinion of panelists.

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(Gersten et al., 2009)

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Authors of the IES practice guide, “Assisting Students Struggling with Reading: Response to Intervention (RTI) and Multi-Tier Intervention in the Primary Grades” found no high-quality intervention studies that demonstrated statistically significant effects for specific intervention programs when used with students who had the most intensive needs in reading (lowest 3-5%). As a result, the recommendations in this area were based on the expert opinion of the review panel.

Off-the-shelf programs are unlikely to work on their own for students with intensive needs. Even programs with research behind them are often only effective for typically developing students. Teachers need to target and individualize their supports for the neediest students whom these programs will likely not benefit.

To read more, see: Gersten, R., Compton, D., Connor, C.M., Dimino, J., Santoro, L., Linan-Thompson, S., and Tilly, W.D. (2009). Assisting students struggling with reading: Response to Intervention and multi-tier intervention for reading in the primary grades. A practice guide. (NCEE 2009-4045). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from <http://ies.ed.gov/ncee/wwc/publications/practiceguides/>.

IES Practice Guide Recommendations in Reading

1. Focus instruction on a small, targeted set of skills
2. Adjust pacing of lessons
3. Schedule multiple and extended sessions daily
4. Include opportunities for extensive practice and feedback during intervention
5. Use input from the RTI team, including precise progress monitoring data, to individualize intervention
6. Teach skills/strategies to mastery

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The panel (Gersten et al., 2009) made the following six recommendations. (*read or paraphrase slide*).

Possible questions for discussion:

In what ways are these recommendations consistent with what you already know about the data-based individualization (DBI) process?

Which of these things do you/your staff already do?

Allow time for participants to respond.

We'll talk more about implementation of these recommendations throughout our work together today.

Background information on these recommendations (below) is excerpted from the Practice Guide. Read the complete report at <http://ies.ed.gov/ncee/wwc/publications/practiceguides/>:

Recommendation 1: Focusing on a small set of reading or reading-related skills is essential to tier 3 in kindergarten through grade 2 because having too many instructional objectives for struggling readers makes it more difficult to learn the skills well enough for proficient reading. In the opinion of the panel, too many instructional objectives can overwhelm students. Achieving proficiency is also difficult for students

when instruction is scattered across different aspects of reading. Diagnostic assessments can help determine why a reading problem is occurring and which reading skills or performance deficits need to be addressed to improve reading performance. Specifically, educators can ask: what aspects of reading are blocking the student from achieving reading proficiency?

Recommendation 2: To provide greater focus to tier 3 instruction, teachers can adjust the overall lesson pace so that it is slow and deliberate (that is, more intensive).

Teachers implementing tier 3 instruction can focus the pace of lessons by focusing on a single component of a lesson. For example, teachers might focus only on introducing the new skill rather than implementing a full lesson that includes introduction, extended practice, and application. Subsequent tier 3 instruction might review the new skills (with modified or shortened instruction from the lesson's introduction) and practice the new skills. Instructional pace is slowed and focused by implementing a series of lessons concentrating only on a variety of review and practice activities. Rather than practicing how to identify the main idea in one lesson, several lessons would practice identifying the main idea.

Recommendation 3: Schools could provide an additional 30 minutes of instruction by creating a “double dose” of reading time for struggling readers. Rather than more of the same, a double dose of instruction means a teacher might introduce skills during the first session and then re-teach with added practice during the second. Duration, or extended implementation of tier 3 intervention, also intensifies instruction. Further research is required to examine the total hours of instruction needed and relative impact of tier 3 duration.

Recommendation 4: To become proficient in the application of newly acquired skills and strategies, students with the most intensive instructional needs will need multiple opportunities to practice with immediate high-quality feedback. According to the panel’s opinion, tier 3 (i.e., intensive) students might require 10 or 30 times as many practice opportunities as their peers.

Recommendation 5: Tier 3 (i.e., intensive) instructional planning requires an increased level of detail because of the individualized nature of the instruction and particular student reading needs. Students with intensive reading needs require substantial supports during the initial stages of learning.

Recommendation 6: Emerging research on tier 3 (i.e., intensive) instruction focuses on individualizing instruction by teaching students the skills to mastery. Before a student moves to the next lesson, skill, or activity, they must demonstrate that a reading skill or strategy is mastered.

Guidance on Intensive Intervention in Mathematics

- Emphasize number combinations and word problems
- Provide explicit instruction
- Design instruction to minimize the learning challenge
- Provide a strong conceptual basis
- Provide opportunities for speeded practice
- Incorporate cumulative review
- Include motivation strategies
- Monitor progress

(Fuchs et al., 2008b)

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Fuchs et al. (2008b) provided guidance for designing intensive intervention in math. You'll notice some overlap with recommendations in reading. We'll spend more time talking about approaches to implementing these strategies throughout today's session.

Categories of Practice for Organizing and Planning Intensive Intervention

Change dosage or time

Change the learning environment to promote attention and engagement

Combine cognitive processing strategies with academic learning

Modify delivery of instruction

(Vaughn, Wanzek, Murray, & Roberts, 2013)

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Today's conversation will be organized about ways to intensify intervention along the following four dimensions.

As we proceed, think about ways the IES practice guide and Fuchs et al. (2008b) recommendations relate to these dimensions (*review slide*). You may notice that the first and second dimensions already occur frequently in your school. These are often the most common methods of intensification. We've called these *quantitative* changes to instruction in prior modules. Quantitative changes typically refer to changes that increase the amount of instruction a student receives. The third and fourth dimensions are consistent with *qualitative* changes, or adaptations that change the method or content of instruction/intervention delivered. We'll spend time discussing each of four dimensions now, but will spend most of the time on dimensions three and four because you may be less familiar with them.

To read more, see: Vaughn, S., Wanzek, J., Murray, C. S., & Roberts, G. (2012). Intensive interventions for students struggling in reading and mathematics: A practice guide. Portsmouth, NH: RMC Research Corporation, Center on Instruction. Retrieved from <http://www.centeroninstruction.org/files/Intensive%20Interventions%20for%20Students%20Struggling%20in%20Reading%20%26%20Math.pdf>.



Check



Before implementing the practices, check that:

- The student's secondary (Tier 2) program is an appropriate match for his or her needs.
- The program has been delivered for a sufficient amount of time to determine response.
- The program has been delivered as planned—for example, if the intervention is supposed to take place for 30 minutes three times per week, did that *actually* happen?

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To ensure that the suggested practices have the greatest impact on student learning, it is important to check the implementation of the student's current secondary (Tier 2) program to ensure that it is appropriate for his/her needs. This is an important first step because if there is a disconnect between what the student's needs are and what the student is being taught, then it won't matter how good a program is implemented; it still won't show student growth. It is also important to ensure that enough data are gathered to support a recommendation for more intensive support and that the student has received the intervention for long enough to show impact. It can also help build the student profile as to which type of program the student will respond to in the future. The exception to this would be if the team has data indicating immediate movement to intensive intervention is warranted. Lastly, it is important that the program be delivered as planned. If the intervention is supposed to take place for 30 minutes three times a week, but is really only being implemented twice a week for 20 minutes, then a student's lack of progress could be attributed to lack of time within a program.

Possible questions for discussion:

Does your school/staff already have a formal or informal checklist to ensure programs are being implemented as designed? Do you think having a checklist would be helpful? What types of information would be on your list? Who would be responsible?

Allow time for participants to respond.

We will talk more about implementation of these recommendations throughout our work together today.

Practice 1: Change Dosage or Time

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Practice 1: Change Dosage or Time

Methods for increasing quantity of instruction:

- Minutes per day
- Minutes per session
- Sessions per week
- Total number of sessions

As mentioned previously, practice 1, changing the dosage or time in instruction, is a change that may already be happening in your school. It is a change that can occur quickly by (*read or paraphrase slide*)

Why should I change intervention time?

When well designed, increased time accelerates learning by:

- Allowing for more instruction.
- Providing more practice with feedback.
- Increasing students' engaged learning time.

Students with intensive needs often require 10–30 times the number of practice opportunities as their peers to learn new information. This takes time!

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You may ask why should I change intervention time? When the amount of time that the student spends in an intervention is increased it **allows for more instruction** to take place, **provides more practice with feedback** since the teacher is present, and **increases students' engaged learning time**. All of these accelerate student learning. Please note that to achieve the greatest results in most cases, increasing the time should be combined with changes to content and method of delivery. **Students with intensive needs often require 10–30 times the number of practice opportunities as their peers to learn new information—This takes time!**

What is the suggested duration of intensive intervention?

Consider:

- The size of the achievement gap with Tier 1 instruction
 - Age of students
 - Number of sessions
- * *Research on the recommended number of sessions varies, but plan for at least 8–16 weeks, or even longer.*

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Determining the duration of an intervention depends on student-related and school-related factors, consider:

Students who are further behind need more intervention time.

Students provided less appropriate Tier I instruction need more intervention time.

Older students will likely need more time in intervention than younger students.

In addition, the research on the number of sessions varies, but it is suggested that intervention should last **at least** 8–16 weeks, and often longer. Older students will likely need much more time, depending on how far behind they are, and the nature of their instructional deficits. Students' progress data should drive decisions about when they are ready to exit intensive levels of support (Vaughn et al., 2012).

What are the suggested length and frequency of intensive intervention?

Consider:

- How far the student is below grade level
- The length and frequency of the previous interventions
- The complexity of the learning tasks
- Student stamina and attention span

* *Evidence suggests that students with intensive needs may benefit from 60–120 minutes of intervention per day.*

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When thinking of the length and frequency it's important to consider:

How far the student's achievement is below grade level

The length and frequency of the previous interventions

The complexity of the learning tasks (e.g., letter naming in kindergarten is less cognitively complex than comprehension of a third grade science textbook).

Student stamina and attention span

To maintain attention and engagement with younger students, staff may consider two sessions per day. Evidence suggests that students with intensive needs may benefit from 60–120 minutes of intervention per day. However, this time may be broken up into several sessions throughout the day (Vaughn et al., 2012).

How should I use the additional time in intervention?



Use the additional time to accelerate learning by:

- Maximizing engaged learning time
- Minimizing waiting and transitions
- Teaching additional skills and strategies
- Providing additional practice opportunities with feedback
- Delivering more explicit, systematic (step-by-step) instruction
- Monitoring student progress to ensure that the additional learning time increases student mastery of skills.

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The following is a list of ways to use additional teaching time. We'll discuss several of these practices in further detail later in the session. (*paraphrase slide*)

As mentioned previously, more time by itself isn't enough. More time is likely to be the most useful when combined with changes to content and the method of delivery.



Strategies for Adding Intervention Time

- Double dip
- Use entry or exit routines
- Reinforce independent use of routines

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Some suggestions for adding intervention time include:

Double dip: Rather than a single intervention block, students might receive intervention at different times during the day (e.g., 20 min in the morning and 20 min in the afternoon rather than a single 40 min session) (Gersten et al., 2009; Vaughn et al., 2012).

When interventions are broken up over multiple sessions in a day, it can help address scheduling challenges, facilitate pre-teaching and reinforcement of new concepts, and support young students who are likely to have shorter attention spans and less stamina than older students. For example, a student may start the morning with 30 minutes of phonological awareness and decoding practice and then spend 30 minutes practicing reading connected text in the afternoon. Again, this not only addresses scheduling issues, but also helps to ensure that student stamina and/or attention spans do not become a barrier to learning.

Use entry or exit routines: Provide independent or peer-mediated practice opportunities for students (e.g., math facts practice, letter-writing, paired oral reading) to minimize unengaged waiting time, and allow multiple small groups to run at once.

Reinforce groups for following routines independently.

Entry and exit routines that provide opportunities for practice of skills may allow interventionists to manage multiple overlapping small groups. In addition, incorporation of these routines may reduce the time students spend waiting, and increase engagement. Reinforcement (e.g., verbal praise, points toward a reward, a sticker chart) helps to promote on-task behavior and allows teachers to manage a larger number of students.



Strategies for Adding Intervention Time

- **Sample entry routine:**

Student comes into the classroom, gets a timer, and does practice with math facts, writing down the scores on a recording sheet.

- **Sample exit routine:**

Student finishes the lesson and does an oral reading fluency practice, either alone or with a partner.

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Students With Disabilities

- For students with individualized education programs (IEPs):
 - Changes to intervention time may require a revision to the IEP if the intervention is delivered as part of a student's special education services.
 - Special education minutes must be specified in the student's IEP.
 - Changes should be discussed with the IEP team, including parents.

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For students with IEPs, changes to intervention time may require a revision to the IEP if intervention is delivered as part of a student's special education program.
Special education minutes must be specified in the student's IEP.
Changes should be discussed with the IEP team, including parents.

Practice 2: Change the Learning Environment to Promote Attention and Engagement

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Adding dosage/time is just one piece of the puzzle; however, it alone is often not sufficient. In the following section, we'll discuss how making changes to the learning environment may increase attention and engagement of students who have intensive intervention needs, and the implications for designing instruction/intervention.

Practice 2: Change the Learning Environment to Promote Attention and Engagement

- Reduce group size.
- Group students with similar needs.
- Change the instructional setting to reduce noise and other distractions and promote academic engagement.

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Altering the group or learning environment may increase attention and engagement by minimizing distractions and increasing the number of student-teacher interactions that are relevant to a particular student. This not only increases individual interactions between a student and teacher, but homogeneity within the group means that it's more likely that all of the activities within the group will be relevant for all students.

What is the ideal group size for providing intervention?

- Small groups, up to four students, may provide the most intensive intervention at the elementary level.
- Research has not identified one ideal intervention group size that increases outcomes for all or most students, particularly in older students in Grades 6–12.

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Group size recommendations: One to four students at the elementary level. Less is known about secondary grades, but some data suggest groups may be up to 10–15 students (Vaughn et al., 2012).

Again, these are intervention changes you probably already make in your school, so we're not going to spend much time talking about them. As with the first strategy, they are unlikely to be effective unless the instruction is an appropriate match in terms of content and method(s) of delivery. We'll talk more about those issues now.

Reducing Group Size With Limited Resources

- Develop entry or exit routines that provide independent or peer-mediated practice opportunities for students.
- Reinforce groups for following routines independently.
- Use peers, parent volunteers, paraeducators, or computer programs for practice activities.
- Use teacher time for instruction and assessment of new skills.

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One limitation that many schools face is how to reduce group size with their limited resources. The following is a list of ways to accomplish this:

Develop entry or exit routines that provide independent or peer-mediated practice opportunities for students. Some sample routines could be: students finishing the practice section of the lesson taught earlier or on the previous day, peer/partner reading (can be used with students at the same level, or students who are at different levels, e.g., a younger student reading to an older struggling student), or something as “simple” as students coming into the intervention room and gathering all of the materials they need, and reading or journaling quietly.

Reinforce groups for following routines independently. Reinforcers can include verbal praise, token economy, where students earn small tokens or “money,” and then use those later to redeem for a bigger prize.

Use peers, parent volunteers, paraeducators, or computer programs for practice activities. There are many great advantages to having peers, parents volunteers, and paraeducators listen to students practice. Using these supports will leave the teacher free to do the heavy lifting in terms of **providing for instruction and assessment of new skills.**

Why small homogeneous groups?

- Increases engaged interaction opportunities between student(s) and teacher
- Provides more opportunities for practice with feedback
- Allows teachers to match instruction to specific student needs
- Allows for closer monitoring of on-task behavior and engagement

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Small homogeneous groups have many advantages, some of which are:

Increases engaged interaction opportunities between student(s) and teacher

Provides more opportunities for practice with feedback

Allows teachers to match instruction to specific student needs, making instruction more relevant

Teachers are better able to monitor on-task behavior and engagement

Students With Disabilities

- For students with IEPs, changes to placement when intervention services are delivered may require a revision to the IEP, if services are delivered as part of the student's special education program.
- If intervention services are delivered as part of special education, placement must be specified in the IEP.
- Changes to placement should be discussed with the IEP team, including parents, and should be considered on an individual, case-by-case basis.

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Practice 3: Combine Cognitive Processing Strategies With Academic Learning

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In the following section, we'll discuss common cognitive characteristics of students who have intensive intervention needs, and their implications for designing instruction/intervention.

What are cognitive processes?

- Cognitive processes comprise various mental activities that direct thinking and learning.
- Students with intensive needs often have challenges with processes related to executive function and self-regulation:
 - Memory
 - Attribution
 - Attention
 - Strategies to set and monitor learning goals

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Cognitive processes comprise various mental activities that direct thinking and learning. Students with intensive needs have frequent issues with cognitive processes related to elements of executive function and self-regulation:

Memory

Attribution

Attention

Strategies to set and monitor learning goals

Treating underlying neurological or processing disorders **separate** from academic instruction is **not** supported by research.



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“Although some students with significant learning difficulties have underlying neurological or information-processing disorders, research does not support the notion that practitioners can identify these disorders (e.g., auditory processing disorders) and then treat them in isolation (e.g., training a child in auditory processing apart from his or her academic learning; Lyon, 1985; Mann, 1979),” (Vaughn et al., 2012, p. 10).

Intensive intervention should be supported by the best available research about what is likely to work for students. Practices that do not have research to support their use will likely be a waste of valuable instructional time.

Cognitive Processing: Research Advances

- Cognitive processes are important and relevant for learning.
- Problems with executive function and self-regulation negatively affect student learning.
- Interventions should combine practices that reduce the impact of processing deficits **with** academic content, not treat them in isolation.

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Paraphrase slide.

In other words, research that integrates understanding of executive functions with academic instruction has yielded the most positive benefits for students with intensive needs. That is, interventions need not prioritize cognitive processes before academic learning can occur. Rather, interventions should support both issues concurrently.

Considerations When Designing Intensive Intervention

Academic interventions also should support cognitive processes such as:

- Memory
- Self-regulation and self-monitoring
- Attribution
- Attention

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Review bullets—you will cover these processes in more detail in the following slides.

How does poor memory impede academic success?

Students with memory problems may have difficulty recalling:

- A sentence or description they just read
- Components of a multi-step math problem
- Steps in a sequence (e.g., math operations, independent work, organizational routines)
- Multi-step directions
- Previous learning that relates to new information
- Information presented in one modality (e.g., auditory only)

(Swanson, Zheng, & Jerman, 2009).

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Let's talk more about these cognitive characteristics and why they have implications for students' learning. As you'll notice, many of these processes share characteristics and related implications. Let's start by talking about ways in which problems with memory can impact students' academic progress (*review slide*).

Possible discussion question: Are there any other ways you've observed poor memory manifesting itself in your students' academic work?

Allow time for participants to respond.

Indicators That a Student Struggles With Poor Memory

- Low scores for digit span or other measures of working memory on cognitive assessments.
- Frequently forgetting steps in a process or routine, or requiring more prompting than peers.
- Need for repeated presentation of new material in order to remember it.
- Not recalling information taught during the previous lesson/day/week (depending on context).
- Gets lost easily.

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The following are indicators that a student may have difficulties with memory (*discuss slide*). Can you think of additional indicators?

What practices help students reduce
the impact of poor memory while
engaged in academic learning?

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Teach Strategies for Taking Notes and Organizing Information



Teach students to write down assignments, and include in daily routines.



Use graphic organizers and key words and phrases for notes.



Teach students to ask for help if they need information repeated.

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Review slide. If time allows, consider asking participants to add to this list, or share strategies they have used in the past to help students develop note-taking skills.

- Teach students to record assignments and due dates in a planner/calendar/assignment sheet
- Use graphic and other text organizers to help students take notes and remember what they read.
- Write key words/phrases, not entire sentences/paragraphs when taking notes.
- Encourage students to self-advocate and ask for help if they need information repeated.

Present Information Using More Than One Modality



- Speak and write/draw/project information as you present it.
- Repeat important instructions, key words, etc.
- Model procedures to provide students with a visual image of the steps.
- Teach students to visualize information in text, including stories, word problems, etc.

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Students with intensive needs—particularly where memory or attention are impacted—often need information presented in more than one way. For example...(*review slide*).

Speak and write/draw/project information as you present it

Repeat important instructions, key words, etc.

Model procedures to provide students with a visual image of the steps

Teach students to visualize information in text, including stories, word problems, etc.

Teach Routines for Important Procedures

1. Get your coat and backpack	
2. Pick up your sack lunch in the hall bin.	
3. Check your mailbox	
4. Put papers in your accordion folder.	

- Use consistent routines.
- Provide a cue sheet/poster for multi-step processes.
- Review steps regularly reteach as needed.

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Students with intensive needs are more successful when they have consistent routines to help them remember procedures. Students will need teachers to use consistent routines to help them remember what needs to happen each day and/or class period. Teachers can also provide a cue sheet or poster for multi-step processes until students can complete them independently. (Pictures can be used for younger students or students who need visual reminders. Actual pictures of the student completing the task may also be beneficial for some students). Teachers should review steps regularly and reteach as needed.

Review Prior Learning Before Presenting New Information

Have students:

- Retell information from the previous lesson.
- Summarize key points using just a few words or phrases.
- Predict/explain how the new information may relate to prior learning.

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Students with intensive needs often need to review prior learning before they learn new information. This review of information, or accessing of background knowledge, can help students with intensive intervention needs connect the new material to previous learning, making it more likely that the students will remember. It also allows teachers to informally assess students' mastery of previous content, which can help clear up any myths or misconceptions students may have.

Some ways in which teachers can review prior learning are:

Have students retell information from the previous lesson (or lessons).

Have students summarize key points using just a few words or phrases.

Explain how the information they are about to learn relates to prior learning.

Other Strategies

- Teacher models out-loud verbal rehearsals of what students need to remember.
- Develop a mnemonic device.
- Use visual or verbal cues as reminders.
- Check for understanding frequently.

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Other strategies for helping students with poor memory include:

- Having the **teacher model out-loud verbal rehearsal of what students need to remember** (e.g., “I can count by 2s, 3s, 4s, etc., to help me with addition and multiplication.”).
- Having the teacher **develop** or use an already existing **mnemonic device** to help students remember information or routines
- **Using visual or verbal cues as reminders**
- Having the teacher **check for understanding frequently**

Stop & Think (Use Handout 1)

- Take a few minutes to review the checklist for categories 1 and 2, and the memory section of category 3.
- What questions do you have about these components?
 - Discuss questions you have and ideas for implementation with your table group.
 - Choose someone from your group to share an approach for implementing one of these items.

• *We'll also discuss questions you have at this time.*

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This activity should take about 10–15 minutes. If you are running over on time, you may chose to skip having participants share an approach they've used, and/or having them discuss ideas with the table groups. Be sure to circulate around the room and be available for questions. Remind participants that questions will be answered at this time. Be sure that the questions are related to the part of the presentation that has been presented. If questions are asked that will come up later, put the questions in a “parking lot” so that they can be remembered at a later time.

Take a few minutes to review the checklist for categories 1 & 2, and the memory section of category 3. These are meant as checklists to help you think about intensifying interventions across various dimensions. This should be used as a resource and added to over time.

In your table groups, discuss questions you have and ideas for implementation. *(if time allows)* have participants choose someone from their group to **share an approach for implementing one of these items.**

Self- Regulation

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In this next section, we will talk about—and then I will model for you—self-regulation strategies to help students with intensive intervention needs.

What is self-regulation?

Self-regulation comprises:

- Planning and setting goals for learning
- Monitoring learning and progress toward goals
- Regulation of language and memory to support learning (e.g., self-talk, use of strategies)
- Attention

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Self-regulation is a learner's ability to take ownership of his/her learning. (*paraphrase or read slide*)

Self-regulation comprises:

Planning and setting goals for learning

Monitoring learning and progress toward goals

Regulation of language and memory to support learning (e.g., self-talk, use of strategies)

Attention

Poor self-regulation and executive function impede academic learning.

Students with deficits in these areas:

- Demonstrate minimal use of self-directed strategies.
- Often exhibit behavior problems because of inattention and poor impulse control.
- Have difficulty taking in new information.
- Often lack the ability to monitor their learning

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Why does poor self-regulation and executive function impede academic learning? Because students with deficits in these areas demonstrate minimal use of self-directed strategies—They need to be explicitly taught. Students also often exhibit behavior problems because of inattention and poor impulse control. Their inattention makes intake of new information difficult, and their lack of monitoring of learning makes it difficult for students to be aware of what they do and do not know, and when they should request help.

How can I teach students to use self-regulation strategies in their academic work?

- Many of the memory practices we have already discussed will help students with poor self-regulation.
- In particular, also:
 - Model thinking-aloud when introducing new concepts.
 - Provide specific feedback.
 - Include students in goal setting and monitoring.
 - Explicitly teach and model use of strategies and routines.

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Many of the memory practices we've already discussed will help students with poor self-regulation.

In particular, also:

- Model thinking-aloud when you introduce new concepts
- Provide specific feedback
- Include students in goal setting and monitoring
- Explicitly teach and model use of strategies and routines

Modeling Think-Aloud Strategies

Model how you approach tasks and solve problems by talking out loud as you:

- Reflect on text
- Implement strategies for answering text-based questions
- Solve word problems
- Give yourself feedback
- Check work

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It is important to model think-aloud strategies for students with intensive intervention needs. All students will benefit from hearing how you approach tasks and solve problems. Some students will not realize that they may already be doing self talk, as they do it automatically, but other students do not know that it is a strategy that is often used by adults. It may be fun to point out to students that they should watch and listen to an adult when the adult can't find something such as keys. Adults engage in think-aloud strategies all the time!

Read or paraphrase slide.

Let's Practice

Clare has 6 red water balloons, 5 blue water balloons, and 4 green water balloons. How many blue and green water balloons does she have in all?

Answer: 9 blue and green water balloons

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Model how you might use a think-aloud strategy to solve this math problem. Use a whiteboard, overhead, or chart paper to write out the problem and model your thinking as you solve the problem. Or, use the sample script on the following slides.

Clare has 6 red water balloons, 5 blue water balloons, and 4 green water balloons. How many blue and green water balloons does she have in all?

Sample Script: (Read math problem.) The question is asking me how many blue and green water balloons in all. I'm going to underline the question and circle "blue and green balloons" in the question to remind me of the question and the label for my answer.

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Remember to do the task as you say the script. For example, as you say, "I'm going to underline the question," be sure that you are actually underlining the question. Items noted in parenthesis are actions that you should do.

Clare has 6 red water balloons, 5 blue water balloons, and 4 green water balloons. How many blue and green water balloons does she have in all?

Sample Script: Next, I look back at the problem, and I see there are 5 blue (circle) and 4 green (circle) balloons. I don't need the information about red balloons because the question doesn't ask me about them. I'll cross that out so it doesn't confuse me. (Cross out, "6 red water balloons.")

Clare has 6 red water balloons, 5 blue water balloons, and 4 green water balloons. How many blue and green water balloons does she have in all?

Sample Script: The question asks how many blue and green balloons in all, so I know I need to add 5 + 4. If I start with 5 and count 4 more (5—6, 7, 8, 9) on my fingers, I get 9. So, my answer is 9 (write 9).

$$5 + 4 = 9$$

Clare has 6 red water balloons, 5 blue water balloons, and 4 green water balloons. How many blue and green water balloons does she have in all?

Sample Script: Now it's time to label my answer. I'm looking back at the question, and I see that I circled blue and green water balloons because that's what the question asks about, so I know that's my label (write the label).

$$5 + 4 = 9 \text{ blue and green water balloons}$$

Clare has 6 red water balloons, 5 blue water balloons, and 4 green water balloons. How many blue and green water balloons does she have in all?

Sample Script: I'm going to check my answer to make sure it makes sense. The question asked me, "How many blue and green water balloons?" Does it make sense that 5 blue plus 4 green equals 9? (Pause to check adding.) Yes, it does. My answer is 9 blue and green water balloons. I'm confident in my answer because I worked and checked carefully.

$$5 + 4 = 9 \text{ blue and green water balloons}$$

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Debrief about what participants just saw.

Possible discussion questions: What components of the self-talk that you just observed were most useful and important?

Allow time for participants to respond.

As you can see, self-talk has a lot of components to it. It is important that we are showing the students exactly what we are thinking as we are thinking of it. Students need to know and see that solving problems and answering questions is an active activity, not just something to muddle through. They need to know that they can and should be making marks on their papers (assuming it's not in a book), and that they need to re-read parts to ensure they get the correct answer.

Your Turn (Option 1)

With a partner, practice self-talk.

Partner 1: Practice being the teacher.

Partner 2: Be the “student” and provide Partner 1 with specific feedback about his or her practice.

Word Problem: Sam had \$12 to spend at the carnival. He spent \$6 on tickets for rides and \$2 on an ice cream cone. A clown also gave him a balloon animal. How much money does Sam have left?

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Have participants work in groups of two.

With a partner, copy this word problem and practice self-talk as you solve it.

Partner 1, practice being the teacher.

Partner 2, be the “student” and provide Partner 1 with specific feedback about his/her practice.

Circulate around the room. After a few minutes, consider asking a volunteer to model his or her talk-aloud practice, and ask the other participants to provide feedback.

Your Turn (Option 2)

Partner 1: Pretend you're reading a story, and you come to a word you don't know how to decode. Turn to your partner and practice how you might think aloud to read this word.

Understanding

Partner 2: What might you do if you don't know the *meaning* of this word?

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Have participants work in groups of two. Have the first partner spend 1–2 minutes thinking aloud to read the unknown word. Then, have Partner 2 think-aloud to identify what he or she might do to figure out the meaning of an unknown word.

How can I provide feedback as students use self-regulation strategies?

- Offer feedback specific to the task or the process.
- Highlight the behaviors that lead to improved work.
- Help students link their behavior to outcomes.

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Review contents of the slide and ask participants to generate examples of specific feedback.

Example

Say this:

"I see you're using the problem-solving steps we practiced yesterday, and all of your answers so far are correct. I can tell you're working carefully and getting better at math."

Rather than this:

"Good job."

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It is important to provide specific feedback to students using self-regulation strategies so that students know what it is that they are doing right. Just telling students "good job" does not tell them what they did that was a "good job" and does not give them feedback on how to replicate it. Further, saying "good job" implies that you think they are doing a good job and takes the ownership away from them. Part of the power of self-regulated strategies is to empower the student. We want students to think and feel like they are doing a "good job." When students take more ownership over their learning, then they are more likely to remember what they are learning.

Your Turn

What are some examples of specific feedback you might provide to students with respect to:

- Academic learning?
- Organization?
- Learning skills?
- Classroom behavior?

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Ask 2–4 participants to share samples of praise or feedback statements.

What are some examples of strategies that help students monitor their own learning?

- Ask students to read the text aloud and think about what the author is saying.
- When checking work, teach students to ask, “Does my answer make sense?”



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What are some examples of strategies that help students monitor their own learning?

- Involve students in setting goals and monitoring their own academic gains with progress monitoring data.
- Keep track (with the student) of how many trials it takes for a student to achieve mastery of a new skill.
- Teach students to ask themselves questions to determine if they are working well and making progress.



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Research indicates that when students are aware of their goals, they make more progress. When monitoring the number of trials needed to reach mastery, use six-cycle graph paper (<http://facstaff.gpc.edu/~apepper/ajpsemiloggraphs.pdf>), daily recording sheets, or a color-coded bar graph (e.g., use blue for +1 facts, green for +2 facts, red for doubles facts) to keep track of how long it takes the student to reach mastery on different skills.

What are some examples of strategies that help students monitor their own learning?

- Teach students to be metacognitive and to identify “breakdowns” in their understanding.

Examples

- When solving word problems, students should ask themselves whether they understand the question.
- Teach students to ask for help when they need it.

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Teach students strategies for thinking about their learning, monitoring understanding, and checking work.

Think-Pair-Share

What are some things you might do to involve students in monitoring their learning progress?

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Ask participants to work with a partner and share some things they might do to involve students in monitoring their own learning progress. If time allows, have a few participants share with the large group. If running short on time, you may choose to skip this.

Attribution

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In this next section, we will talk about how maladaptive attributions can impede academic success and strategies to help students with intensive intervention needs develop more functional attribution.

How does maladaptive attribution impede academic success?

Attribution: A person's beliefs about the causes of his or her academic failures and successes

- Students with maladaptive attribution may think that failure is due to stable, internal causes that cannot be changed, and that success is due to unstable causes such as luck.
 - **Internal:** "I did poorly on the spelling test because I'm stupid."
 - **External:** "I was really lucky to get an 'A' on my spelling test because the teacher gave easy words."

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Review slide. Ask participants to think about more functional attribution statements.

How can I support students to develop more functional attribution?

Consider integrating attribution and motivation training and supports:

- Scripts/strategies to counteract negative self-talk
- Include students in setting goals
- Reinforce progress, and connect it to their effort

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- Help students to develop strategies or scripts when they engage in negative self-talk, and reinforce students for using them.
- Include students in goal-setting and monitoring to help them connect their hard work to increased academic success.
- Celebrate progress, and provide explicit feedback that connects it to their use of new/appropriate learning strategies, skills, or behaviors.

Examples of Self-Talk

- I did well on the spelling test because I studied hard and learned the words.
- If I work hard, I can learn to do new things even if they're hard.
- Sometimes things don't go my way even when I work hard, but it's not necessarily my fault. This happens to everybody sometimes. I should keep trying my best.

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Ask participants to suggest other examples.

Handouts 1 and 2: Planning Intensive Intervention

Review the checklist for Intensification categories 1–3 on Handout 1. Then, use Handout 2 to guide your team’s discussion of a student in your school. As you review each component, consider:

- What have we already tried?
- What other strategies in categories 1–3 might work (either on the Handout 1 list or otherwise)?
- What data indicate that these might be effective for the student?

You will have time to complete other elements of this form later in our session.

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Depending on time, allow teams 10–30 minutes to complete this handout on 1–3 students for whom teams brought data.

We'll resume in 10 minutes.



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Practice 4: Modify Delivery of Instruction

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In the following section, we'll discuss how modifying the delivery of instruction can affect students with intensive intervention needs, and their implications for designing instruction/intervention.

Modifying Delivery of Instruction

1. Consider the instructional match and prioritize skills to teach
2. Systematic Instruction
3. Explicit Instruction
4. Precise, simple, and replicable language
5. Frequent opportunities for student response
6. Specific feedback and error correction procedures
7. Opportunities for practice, development of fluency, and review

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Next, we'll talk about ways you can modify how you deliver academic content to make it more intensive. We'll discuss the following strategies (*briefly review slide*).

1. Instructional Match and Prioritizing Skills



- Prioritize what you want them to know.
- Maximize learning time by ensuring that instructional content aligns with students' demonstrated needs.
- Use precise, frequent progress monitoring to determine if learning is occurring.

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Students with intensive needs often require 10–30 times the number of practice opportunities as their peers to learn new information—this takes time, and requires that you prioritize what you teach.

2. Systematic Instruction

Break down complex skills into smaller, manageable “chunks” of learning and carefully consider how to best teach these discrete pieces to achieve the overall learning goal.

- Prioritize and sequence learning chunks from easier to more difficult.
- Use scaffolding.
- Provide temporary supports to control the level of difficulty throughout the learning process.

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Systematic instruction means breaking down complex skills into smaller, manageable “chunks” of learning and carefully considering how to best teach these discrete pieces to achieve the overall learning goal.

Prioritize and sequence learning chunks from easier to more difficult

Use scaffolding- when tasks are scaffolded, they allow students to develop independence and competence with the new skills.

Provide temporary supports to control the level of difficulty throughout the learning process, and remove those supports as students become more independent.

“But we have to teach to the standards.”

- Standards specify what students should know, not how to teach them.
- Many Common Core State Standards overlap with state's current standards.
- Common Core State Standards still emphasize basic skills, especially for students in Grades K–5 (International Reading Association CCSS Committee, 2012).
- Prioritize what standards to teach (Gersten et al., 2009).
- You can provide standards-relevant instruction across levels of cognitive and adaptive functioning (see Handout 3).

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Yes, Common Core State Standards are being used in most states throughout the country. Remember that the standards specify what students should know, not how to teach them. We still need strong teachers and explicit strategies to teach students with intensive needs for them to progress toward these learning targets. Also, many of the Common Core State Standards already overlap with your state's current standards. For example, the International Reading Association has stated that the Common Core standards still emphasize basic skills especially for K-5 students.

Handout 3

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Handout 3, Illustrating Common Core State Standards—Aligned Instruction in Mathematics Within a Multi-Level Prevention System

Common Core State Standard Addressed: 3.OA.3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities.

Core Instruction:

- Provide research- or evidence-based instruction in problem solving (e.g., Hot Math Whole Class Instruction)*
- Provide explicit instruction to identify problem schemas
- Provide explicit instruction in problem-solving procedures
- Incorporate peer-mediated and independent practice opportunities
- Teach far transfer of skills to novel problem types
- Incorporate classroom motivation strategies to promote engagement

Secondary Intervention:

- Use an evidence-based intervention program (e.g., Hot Math Tutoring Instruction)**
- Provide explicit presentation of core content, including identification of problem schemas, solution procedures, and strategies
- Provide small group instruction
- Provide opportunities for peer and teacher feedback
- Incorporate individual motivation strategies to promote engagement
- Collect progress-monitoring data to determine response

Intensive Intervention*:**

- Use progress-monitoring and individual analysis data to identify instructional deficits and necessary adaptations to the Hot Math Tutoring platform
- Provide explicit instruction in basic concepts including number sense, fact fluency, fraction concepts, and multiplicative reasoning
- Provide standards and spend extended time providing explicit instruction on those standards
- Collect progress monitoring data regularly to determine instructional effectiveness, and modify instruction as needed

Alternate Achievement Standards**:**

- Provide instruction appropriate for the student's level of cognitive and symbolic functioning
- Identify and work on skills that align with standards, such as demonstrating understanding of various representations of multiplication and division
- Monitor data to evaluate and adapt instruction as needed
- Utilize emerging technology to teach and assess skills

Designing Intensive Intervention for Students With Severe and Persistent Academic Needs

Handout 3—1
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*Fuchs, Fuchs, Prentice, Burch, and Paulsen (2002)

**Fuchs et al. (2008a)

*** Fuchs et al. (2008b).

Powell & Fuchs (2013)

****Courtade-Little & Browder (2005)

Handout 3 provides an illustration of how to plan standards-relevant instruction throughout levels of a multilevel system, including for students with significant cognitive challenges.

Activity: Thinking About Standards (Optional: Handouts 3 and 4)

- Review Handout 3.
- With your table group, discuss—
 - Given today's conversation, what additional practices might you try to further intensify intervention if data suggest it's warranted?
 - How might this apply to another standard you might prioritize? (See Handout 4.)

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Please review Handout 3. With your table groups, discuss: Given today's conversation, what additional practices might you try to further intensify intervention if data suggests it's warranted? Second, using Handout 4, how might this apply to another standard you might prioritize?

Handout 3 provides an illustration of how to plan standards-relevant instruction throughout levels of a multilevel system, including for students with significant cognitive challenges. If time allows, encourage teams to review and discuss this illustration, and then use Handout 4 plan for an additional standard. Encourage them to focus on the intensive intervention column if time is limited, and remind them to refer to the content from today's presentation. To look up additional standards, visit <http://www.corestandards.org/>.

3. Explicit Instruction

- Overtly teach the steps or processes needed to understand a construct, apply a strategy, and/or complete a task.
- It's often used for:
 - Teacher-led instruction of new skills
 - Teaching students to apply generalized knowledge or skills to novel settings
 - Addressing learning needs, including strategies to support cognitive processing

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Explicit instruction works well for students with intensive intervention needs because well-designed, explicit instruction comes with scaffolds built into the process.

It's often used for:

Teacher-led instruction of new skills

Teaching students to apply generalized knowledge or skills to novel settings

Addressing learning needs, including strategies to support cognitive processing

Components of Explicit Instruction

1. Tell students what you want them to know
2. Provide an advance organizer
3. Assess background knowledge
4. Model (“I do”)
5. Provide guided practice (“We do”)
6. Provide independent practice (“You do”)
7. Check for maintenance

Note: Although there are no specific guidelines for this, the bulk of the instruction should fall within the guided practice phase.

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There are many components for explicit instruction. (*review slide*).

“I do”, “we do”, “you do” approach—or model/lead/test—is a major part of the scaffold that is built into explicit instruction. It helps to walk students through the steps of what you want them to know, providing a perfect example of what you expect of them, followed by gradually releasing responsibility (giving more to the students), until finally students are able to be successful on their own.

For example, when teaching students to look for the main idea you might do the following:

As a class, read a story.

Model

Then have the teacher go back and re-read the first paragraph modeling think-aloud (what is mentioned the most, what are the details).

Lead

Teacher would ask students to participate while teacher is still doing the bulk of the work.

Test

Have students complete the task on their own without support (or with a pair).

How can I make instruction more explicit and systematic?

- Organize instruction to allow for high levels of student success—start with easy tasks.
- Break tasks into smaller, simpler steps.
- Provide:
 - More modeling with clearer explanations
 - More concrete learning opportunities
 - Temporary support and gradually it reduce over time
 - More opportunities for response, practice, and feedback

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Making instruction more explicit and systematic takes some management. Teachers need to organize instruction to allow for high levels of student success by starting with easy tasks. Once students feel success, this builds confidence. Plus, starting with smaller component skills will help build to bigger composite skills that use the previous knowledge. Tasks should also be broken down into smaller, simpler steps to allow students to access what is being asked of them.

The teacher also needs to provide more modeling with clearer explanations.

Students need to know exactly what is being asked of them. Teacher models take the guess work out for the students and shows them exactly what the teacher is looking for. Teachers should also provide more concrete learning opportunities using pictures, graphics, manipulatives, or think-alouds. Pictures and manipulatives help with students who learn with different modalities. Provide temporary support and gradually it reduce over time. Using “I do, we do, you do,” approach can help teachers give students the support they need while they need it, but will also remind them to gradually give more responsibility to the students. And lastly, teachers need to provide more opportunities for response, practice, and feedback. Remember students with intensive needs often require 10–30 times the number of practice opportunities as their peers to learn new information!

4. Using Precise, Simple, and Replicable Language

- Develop specific language for the parts of lessons that involve explaining a very important idea.
- Use correct vocabulary for the discipline, as appropriate, such as:
 - Math: divisor, addend
 - Science: waxing gibbous moon, chrysalis
 - English: protagonist, conflict

Make sure you say it the same way every time.

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Consistency helps students with intensive needs. When teachers use precise, simple language, students are able to know right away exactly what the teacher is talking about. Oftentimes these students are a few steps behind their peers because they are trying to figure out what is being talked about, and so they miss what is being taught. When teachers are consistent and say what they mean the same way every time, they can be more successful in delivering content to their students.

Precise, Simple, Replicable Language

Too long

The letter c can make two different sounds. Sometimes it will say /k/. This happens when it is followed by a, o, u, or any consonant except h. In other cases, c makes the /s/ sound, when it comes before e, i, or y.

- Same idea repeated multiple ways
- Too much detail

Shorter

C makes /he/k/ sound before a, o, u. It makes the /s/ sound before e, i, and y.

- Language repeats
- Appropriate level of detail
- Still slightly confusing
- Could still be shorter

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These are non-examples, but showing progressive improvement toward more precise, simple language.

Precise, Simple, Replicable Language

C says/k/ in front of a, o, u. It says /s/ in front of e, i, and y.

- Short
- Pretty clear (will need further instruction, which is the whole reason we teach!)
- Same language used

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This is an example of showing precise, simple, replicable language. It is short, pretty clear, and the same language is used over and over.

5/6. Why provide frequent opportunities for student practice with feedback?

- Frequent student response can assist the teacher in monitoring student understanding.
- Teacher feedback during student practice can be a powerful tool for refining and mastering new skills.
- Feedback prompts students to continue successful practice.
- Quick corrections prevent students from practicing errors.

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Frequent student response can assist the teacher in monitoring student understanding, and teacher feedback during student practice can be a powerful tool for refining and mastering new skills.

Feedback prompts students to continue successful practice.

Quick corrections prevent students from practicing errors.

6. What is the most effective type of feedback?

- Feedback should be:
 - Clear and precise
 - Specific
 - Tied directly to the student's actions

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Effective feedback on student responses is clear and precise, communicating specifically which aspects of the task students performed correctly or incorrectly. Feedback should be tied directly to the student's actions and the learning goals.

6. What is the most effective type of feedback?

When a student makes errors, always:

- Explain why the answer was incorrect
- Model the correct response
- Have the student provide a correct response before moving on
- Recheck later in the lesson/activity

What is the best time to offer feedback?



- Immediately for discrete tasks (e.g., solving a math fact, spelling a word)
- After a short delay for more complex tasks (e.g., writing a paragraph) to allow students to think through the process
- Timely feedback can:
 - Prevent inaccurate practice
 - Increase the rate of student mastery
 - Ensure successful, efficient learning

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Feedback should be given immediately for discrete tasks (e.g., solving a math fact, spelling a word), or after a short delay for more complex tasks (e.g., writing a paragraph) to allow students to think through the process. Delaying feedback beyond the instructional session is less valuable because students have already moved on to something else. The quicker feedback can be given, the quicker students will know what is expected of them, what they need to do. Timely feedback can also prevent inaccurate practice; increase the rate of student mastery; and ensure successful, efficient learning.

Sample Error Correction Script

Student: 3 + 3 equals 5.

Teacher: That's not quite right, watch me. If I start with 3 fingers and count 3 more fingers (demonstrate), 4, 5, 6, I get 6 (show fingers). So, 3 + 3 equals 6 (pause). What does 3 + 3 equal?

Student: 6

Teacher: That's right, $3 + 3 = 6$. Let's try another problem. (After a few more problems, go back to $3 + 3$ and have the student provide the answer.)

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Read the sample script on the slide. Ask participants what they notice about the same error correction. Is this explicit instruction? Does it follow the I do, we do, you do format?

Possible discussion question: Why is this better than simply telling the student the answer?

Allow participants time to answer.

7. How should practice take place in an intervention?



- **Guided practice:** after you have modeled a new skill or strategy
- **Independent practice:**
 - Incorporated after students begin to demonstrate mastery of the new skills or content
 - Does not substitute for explicit and systematic instruction and guided practice

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Practice is an important part of an intervention. Use guided practice after you have modeled a new skill or strategy to develop students' fluency and independence with it.

Independent practice is essential, but it does not substitute for explicit and systematic instruction and guided practice. Independent practice should be incorporated after students begin to demonstrate mastery of the new skills or content. During independent practice, all reading material should be at the student's independent reading level to avoid frustration and practice of errors.

7. How should practice take place in an intervention?



- Incorporate daily practice routines at the beginning and/or end of an intervention period.
- Give homework that facilitates practice, not learning new information.
- Reinforce on-task behavior during independent practice.

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Incorporate daily practice routines at the beginning or end of an intervention period to ease transitions between groups, allow for overlap, and maintain student engagement

Give homework that facilitates practice, not learning new information.

Reinforce on-task behavior during independent practice.

Handouts 1 and 2: Planning Intensive Intervention

- Review the checklist for category 4 on Handout 1. Then, use Handout 2 to continue your team's discussion of a student in your school.
- Consider:
 1. What have we already tried?
 2. What other strategies might work (either on the Handout 1 list or otherwise)?
 3. What data indicate that these might be effective for the student?
 4. Prioritize what intervention practices you will use, and discuss how your team will monitor progress.

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Depending on time, allow teams 10–30 min to complete this handout on 1–3 students for whom teams brought data.

Remember to circulate around the room to assist teams and answer questions they may have.

Optional Activity

Observing Intervention

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Observing Intervention (Handout 5)

Watch one or more of these short Teachertube video clips of teachers providing small group intervention.

1. How have these teachers applied strategies for intensive intervention to their teaching?
2. What additional strategies might they try to further intensify their instruction?

Math flashcards (1:31)

http://www.teachertube.com/viewVideo.php?video_id=214870&title=Number_Flashcards&vpkey

Sounding Out Accuracy (1:08)

http://www.teachertube.com/viewVideo.php?video_id=15343

K-PALS (3:09)

http://www.teachertube.com/viewVideo.php?video_id=214871

Writing Words (2:17)

http://www.teachertube.com/viewVideo.php?video_id=214759

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Depending on time available, you may complete 1–4 of these videos. Encourage participants to pay particular attention to the intervention principles/strategies they see in the clips, and then use the questions on the slide to guide discussion. Although we do not necessarily consider all of these to be examples of “perfect” instruction, encourage teachers to focus on how intensification strategies are applied, not the instructional content.

Addressing Common Barriers to Implementing Intensive Intervention

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Complete this section only if time allows.

“I don’t have time for this. ...There are too many students.”

- Choose intervention changes that are feasible to implement and maintain.
- Decide that intensive intervention is a priority for the 3–5 percent of students who need it. This requires buy-in from staff as well as school and district leadership.
- If significantly more students appear to need intensive intervention, consider parallel changes to core and secondary (Tier 2) instruction/intervention.
- Do not overburden your system by trying to serve significantly more than 3–5 percent of students at this level of intervention.

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We’re all aware that time is a precious commodity in schools. Intensive intervention requires a commitment on behalf of staff to ensure that there is time allocated in the schedule to ensure delivery of intervention, and to monitor progress. For that reason....
(review slide)

Choose intervention changes that are feasible to implement and maintain.

Decide intensive intervention is a priority for the 3-5% of students who need it—This requires buy in from staff as well as school and district leadership.

If significantly more students appear to need intensive intervention, consider parallel changes to core and secondary (Tier 2) instruction/intervention.

Do not overburden your system by trying to serve significantly more than 3-5% of students at this level of intervention.

“But we don’t teach Program X to Yth graders.”

- Instruction that does not align with students’ needs is not likely to benefit them.
- Plan to make exceptions to scheduling and grouping policies for these students when data suggest they require it.
- Collect progress monitoring data, and review it regularly to determine if the student is benefiting from his or her intensified program.

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Many schools design intervention blocks and topics based on students’ chronological grade level. Although this may be OK for students receiving secondary (Tier 2) interventions, students with intensive needs are likely to be significantly behind their peers. Thus, they may require substantively different instruction. For DBI to be effective, school schedules must be flexible to accommodate these students’ unique programming needs.

- **Instruction that does not align with students’ needs is not likely to benefit them —**
Make sure that students receive intervention that matches their instructional needs. DBI is about individualized supports for a small number of students.
- **Plan to make exceptions to scheduling and grouping policies for these students when data suggest they require it.**
- **Collect progress monitoring data and review it regularly to determine if the student is benefiting from his/her intensified program.**

“That’s not my job.”

- State and federal accountability measures require that **all** students make progress toward standards.
- Given the range of needs in general education classrooms, intensive intervention is unlikely to be successful if left to classroom teachers alone—they will need support.
- Identify interventionists (e.g., special education teachers, reading or math specialists) to support students throughout the building.
- Use flexible scheduling and staff allocation strategies to allow interventionists to serve a variety of students. Visit <http://www.rti4success.org> for resources.

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Intensive intervention requires a commitment on behalf of staff to ensure that all students make progress toward standards. (*review slide*)

“I don’t know what to do if the intervention isn’t working.”

- Revisit this presentation and the references listed.
- Make sure you monitor progress at an appropriate level.
- Collect additional diagnostic data to determine specific skill deficits.
- Consider integrating behavior or motivation strategies with academic instruction.
- Meet regularly with your team to identify and refine intervention strategies.

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Not all interventions will work equally well for all students, but it is an important part of DBI to ensure that individual interventions are working for specific students. If an intervention isn’t working, it is important that a change be made. Before making a change, consider the following:

Revisit this presentation and the references listed at the end of today’s slides.
Make sure you monitor progress at an appropriate level—If measures are too difficult, you may not detect change.

Collect additional diagnostic data.

Consider whether behavior or motivation strategies should be integrated with academic instruction.

Meet regularly with your team to identify and refine intervention strategies.

Closing

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Review Session Learning Objectives

- Review recommendations for intensifying academic intervention
- Discuss four categories of practice for intensification, and underlying elements
- Begin planning for intensive intervention with your students
- Plan for common barriers to implementation

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Review learning objectives and relate them back to the content of the presentation.

Things to Remember

- Try a small number of changes at a time, so you know what is working and what is not.
- Frequent, precise progress monitoring data are essential to evaluate effectiveness.
- Students will likely need ongoing intervention changes over time.
- You don't have to wait for a team meeting to make a change, especially if it's several weeks off.
- You are not alone—your team, coach, and NCII staff are here to help!

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