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What Is It?

In a multi-tiered system of support, we often conceptualize intensive interventions as supplemental academic or behavior supports delivered to a small group of students at Tier 2 or intensive, individualized supports at Tier 3. At Tier 2, some students may not initially respond to the standard protocol of an intervention. In these situations, it may be useful to adapt or intensify components of the intervention to improve student responsiveness before moving a student to a more intensive, individualized intervention. There are some evidence-based teacher practices that can be used to intensify supports for students who struggle with academics or behavior in the context of both Tier 1 and Tier 2 supports.

One evidence-based teacher practice that can be used to intensify supports for students at Tier 1 or Tier 2 is increasing opportunities for students to respond during classroom instruction. Opportunities to respond (OTR) are defined as behaviors that require student responses and are usually followed by feedback (MacSuga-Gage & Simonsen, 2015; Ferkis, Belfiore, & Skinner, 1997). OTR can be delivered by teachers, peers, or via technology (Haydon, MacSuga-Gage, Simonsen, & Hawkins, 2012). Research finds several positive student outcomes associated with increased OTR including improved outcomes in reading (Skinner, Smith, & McLean, 1994) and math (Skinner, Belfiore, Mace, Williams-Wilson, & Johns, 1997), improved academic engagement (Sutherland & Wehby, 2001), and decreases in disruptive behavior (Sutherland & Wehby, 2001). Further, frequent OTR allow teachers to adjust instruction based on student feedback, improve the quality of a lesson, and increase student engagement (CEC, 1987).

An example of a teacher-directed OTR during math instruction includes a teacher asking, “What is 2 x 4?” A student may respond to the teacher’s question saying, “8.” The teacher would then provide feedback to the student saying, “That is correct. 2 times 4 equals 8. Great job.” These three components (teacher question, student response, and teacher feedback) make up an OTR. An example of a peer-directed OTR during peer tutoring on sight words could include the peer tutor stating, “What word is this?” while holding up a flash card with the sight word “cat.” The tutee may respond saying, “car.” The peer tutor would provide the tutee with feedback saying, “No, this is the word cat. Can you say cat?” As with the teacher-directed OTR, this peer-directed OTR included three components: a behavior that required a student response, a student response, and feedback.

The methods described above can be applied in the context of Tier 1 or Tier 2 instruction to increase the number of OTR each student receives and improve outcomes for students with disabilities. This practice guide will answer the following questions related to these common strategies teachers can use to increase OTR: (1) For whom is it intended? (2) How does it work? (3) How adequate is the research knowledge base? (4) How practical is it? (5) How effective is it? (6) What questions remain? (7) Where can I learn more?

For Whom Is It Intended?

Increasing OTR is appropriate for many students across grades, regardless of educational placement. Strategies to increase OTR can be implemented by teachers, aides, tutors, and any other school personnel who may instruct students in whole class, small group, or individual settings. When these methods are used to increase OTR, there are benefits for many students in the classroom, but it may be particularly effective for students with disabilities.

Research has shown that when teachers of students with disabilities self-monitor their instruction, there is a significant increase in their rates of OTR (Partin, Robertson, Maggin, Oliver, & Wehby, 2010). By using choral responding a teacher can increase the number of OTR each student receives during a given instructional block and increase the likelihood that students with disabilities will actively engage in instruction (Clarke, Haydon, Bauer, & Epperly, 2016).

How Does It Work?

If a teacher desires to increase classroom engagement and improve student response rates, increasing the number of OTR is a great option. One common intervention to increase OTR is the use of response cards. The response card technique is popular because it requires minimal pre-planning and can be used in whole-group and small-group instruction. To implement a response card intervention, a teacher will first need to decide what type of student response modality they will use. Depending on the age and grade of students in the classroom, a teacher may decide to use small whiteboards for students to write their answers or pre-printed cards with an array of possible answers.

To illustrate this intervention, let's follow Ms. Jenkins as she implements the response card technique in her 1st grade classroom. Ms. Jenkins would like to increase participation and engagement during her phonics lessons. She provides each student with four small flashcards each containing one letter printed in the center: c, r, s, and t. During her whole group instruction, the teacher poses the following question to the entire class: "What sound do you hear at the beginning of the word 'tall.'" She provides the class enough time to select a response, usually 5 to 10 seconds. On the teacher's cue, all students in the class hold up their response and show the teacher. The teacher then provides some form of feedback, which may be something as simple as "Yes, t is the first letter in the word tall." In this example, every student in the classroom was participating in instruction and given an opportunity to respond. The teacher was also able to quickly see all student answers and make instructional decisions (i.e., identify students who were incorrect and may need more support). While this example illustrated a whole group activity, this method could very easily be implemented in a small group instructional setting.

Another technique that many teachers use to intensify this intervention is self-monitoring the number of OTR they present to their class or small group. When self-monitoring OTR, a teacher keeps data on the number of OTR they offer to their class or to individual students. To do this, a teacher may audio or video record short segments of their instruction and review these at a later time, coding the number of OTR presented. The teacher may choose to graph this information and set a goal to increase the number of OTR presented.

How Adequate Is the Research Knowledge Base?

There is a significant amount of research about the use of OTR in the classroom. A synthesis of the OTR literature conducted in 2015 identified 15 studies that examined the effects of OTR on student outcomes (MacSuga-Gage & Simonsen, 2015). The synthesis included participants with and without disabilities, in elementary, middle and high schools. Results revealed positive outcomes across student populations and settings, indicating that OTR is an effective practice for increasing time on task and academic achievement, and decreasing disruptive behaviors.

Gardner, Heward, and Gross (1994) found that increasing OTR increased students' academic achievement and rates of response. Students were given quizzes the day after instruction and had significantly higher scores on these quizzes in conditions with higher OTR. Haydon and Hunter (2011) found that increasing OTR through single student response (calling on a single student) and hand raising in unison for two students in a middle school general education class resulted in increases in on-task behavior as well as increases in academic achievement. Haydon, Conroy, Scott, Sindelar, Barber & Orlando (2010) looked at single student response, choral response, and mixed response methods of increasing OTR with six elementary students in the general education setting. Results showed decreases in off-task behavior and decreases in disruptive behaviors in the mixed responding condition, as well as increases in active participation in the mixed-response condition.

How Practical Is It?

OTR is extremely practical and can be implemented in multiple settings, for a variety of students. Choral responding requires no extra materials or special training to implement, making it the method requiring the least amount of resources. Response cards are equally practical, requiring only whiteboards and markers for student use.

Teacher self-monitoring of OTR requires a bit more investment of time and materials, but it is still a practical strategy. An audio recorder is needed to record lessons of at least 15 minutes in duration. Audio recorders are inexpensive and easily obtained. Self-monitoring also requires the teacher to invest the time to listen to and code a 5-minute sample of instruction as well as the time to graph and review the data obtained on a weekly basis. This weekly investment of time is feasible, and teachers have reported being satisfied with the results of this intervention (Partin, Robertson, Maggin, Oliver, & Wehby, 2010).

Performance feedback requires the most significant investment of time and resources. Implementing performance feedback requires the time of an observer over several instructional sessions as well as time for the teacher and observer to meet and discuss levels of OTR after each session. While an investment of time, this is still a realistic intervention to implement in schools where teachers have colleagues or instructional coaches who can conduct observations and provide data-based feedback.

How Effective Is It?

Response cards (e.g., whiteboards or student response systems) or choral responding have been found to increase student engagement, active student responding (Clarke, Haydon, Bauer, & Epperly, 2016), and measures of academic achievement (Lambert, Cartledge, Heward, & Lo, 2006; Narayan, Heward, Gardner, Courson, & Omness, 1990). Additionally, response cards or choral responding have been found to reduce student off-task or disruptive behavior (Lambert, Cartledge, Heward, & Lo, 2006).

Davis and O'Neill implemented response cards with a group of middle school students with learning disabilities who also received ESL instruction. The study took place in the context of direct instruction while the teacher provided fill-in-the-blank questions related to that day's lesson. The study employed an ABAB design to assess the effects of response cards on students' academic and off-task responding. The study found a functional relation between response cards and an increase in students' academic responses. Additionally, students' average weekly quiz scores were higher when teachers used response cards (Davis & O'Neill, 2004).

Studies have found that providing teachers with performance feedback on OTR increases the rate of teacher-directed OTR (e.g., Kretlow, Cooke, & Wood, 2012; Sutherland, Alder, & Gunter, 2003). For example, Sutherland, Alder, and Gunter implemented an observation and feedback intervention to increase a teacher's rate of OTR in a classroom for students with emotional and behavioral disorders (EBD). The intervention included an initial training on OTR, during which

the observer and teacher discussed the benefits of increased OTR and set a goal of providing three OTR per minute. Following initial training, the observer shared the teacher's rate of OTR per minute with the teacher, and the teacher graphed his daily rate of OTR. Using an ABAB design, researchers observed an increase in the teacher's rate of OTR when the performance feedback intervention was in place (Sutherland, Alder, & Gunter, 2003).

While studies such as those referenced above have found that increased OTR are associated with positive student outcomes, there is a gap in the literature base in terms of assessing the magnitude of effect associated with these interventions. Future research should not only assess how effective OTR are in terms of their impact on student outcomes, but should also assess the relative effectiveness of different methods used to increase OTR.

What Questions Remain?

The evidence for the positive effects of OTR is strong, as well as the evidence for a variety of methods for assisting teachers in increasing OTR. However, some questions remain:

- What is the optimal rate of OTR to provide students during instruction? Does this rate differ for different types of instructional content (e.g., instruction of new material, review of previously taught material)?
- Which methods for increasing OTR do teachers find most practical to implement?
- Are there differing levels of response to various types of OTR (choral response, response cards, etc.) based on student characteristics?
- Which methods for increasing OTR result in the longest lasting gains?

Answering these questions will increase our knowledge of how best to increase and implement OTR, however, they by no means prevent teachers from implementing OTR with the information we do have. While research has not identified the optimal rate of OTR teachers should provide during different types of instruction, it is clear that providing students with more OTR results in improved student academic and behavior outcomes. An investigation that evaluates which method of increasing OTR leads to the largest and longest gains will help us identify the strongest method for teachers to use. Even so, we already have evidence that response cards and teachers self-monitoring the number of OTR they provide are both likely to help teachers increase their use of OTR. We also know the methods for increasing OTR and the various types of OTR presented in this guide are generally practical in nature, though we may not know which methods are preferred by teachers.

Where Can I Learn More?

- EBI Network**
ebi.missouri.edu/wp-content/uploads/2016/05/OTR-EBI-Brief.pdf
 This handout provides step-by-step instructions on how to increase OTR in whole-class instruction and in peer tutoring opportunities. This handout also lists critical components of the intervention that are key to its success.
- Kentucky Teacher Education Journal**
digitalcommons.wku.edu/cgi/viewcontent.cgi?article=1018&context=ktej
 Additional information discussing the research behind providing sufficient OTR, discusses the rate of OTR teachers are providing in schools in relation to optimal rates suggested by research, and provides strategies for increasing OTR during classroom instruction.
- Intervention Central**
www.interventioncentral.org/academic-interventions/general-academic/group-response-techniques
 This website presents two group-responses techniques - choral responding and response cards - and provides information on how to use these strategies successfully in your classroom.
- Intervention in School and Clinic**
 Menzies, H. M., Lane, K. L., Oakes, W. P., & Ennis, R. P. (2017). Increasing students' opportunities to respond: A strategy for supporting engagement. *Intervention in School and Clinic*, 52(4), 204-209. DOI: 10.1177/1053451216659467
 This article offers a rationale for increasing OTR to promote student engagement and decrease disruptive behaviors. A step-by-step guide is presented to demonstrate how to effectively implement this strategy in the classroom.

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