IES Institute of Education Sciences

What Works Clearinghouse™

Teacher-Delivered Behavioral Interventions in Grades K-5

A Practice Guide for Educators

WWC 2025001
U.S. DEPARTMENT OF EDUCATION

A publication of the National Center for Education Evaluation and Regional Assistance (NCEE) at IES

Teacher-Delivered Behavioral Interventions in Grades K–5
December 2024

PANEL

Kathleen Lynne Lane (Chair)
University of Kansas

Tabathia Baldy
Georgia Department of Education

Tammy Becker
University of Kansas
Lawrence Public Schools

Catherine Bradshaw
University of Virginia

Virginia Dolan
Anne Arundel County Public Schools *(Retired)*

Kent McIntosh
University of Oregon

Rhonda Nese
University of Oregon

Ruthie Payno-Simmons
RPS Educational Impact

Kevin Sutherland
Virginia Commonwealth University

STAFF

Allison Dymnicki

Brian Freeman

Sebastian Lemire

Shawn Moulton

Allan Porowski
Abt Global

Laura Holian
AnLar

PROJECT OFFICER

Jonathan Jacobson
Institute of Education Sciences

WWC 2025001
U.S. Department of Education

IES Institute of Education Sciences

This report was prepared for the National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, under the What Works Clearinghouse contract to Abt Global (Contract 91990021F0370).

DISCLAIMER

The opinions and positions expressed in this practice guide are those of the authors and do not necessarily represent the opinions and positions of the Institute of Education Sciences or the U.S. Department of Education. This practice guide should be reviewed and applied according to the specific needs of the educators and education agency using it, and with full realization that it represents the judgments of the review panel regarding what constitutes sensible practice, based on the research that was available at the time of publication. This practice guide should be used as a tool to assist in decision making rather than as a "cookbook." Any references within the document to specific education products are illustrative and do not imply endorsement of these products to the exclusion of other products that are not referenced.

U.S. DEPARTMENT OF EDUCATION

Miguel A. Cardona
Secretary

INSTITUTE OF EDUCATION SCIENCES

Matthew Soldner
Acting Director

NATIONAL CENTER FOR EDUCATION EVALUATION AND REGIONAL ASSISTANCE

Matthew Soldner	Elizabeth Eisner	Jonathan Jacobson
Commissioner	*Associate Commissioner of Knowledge Use*	*Branch Chief for Knowledge Synthesis*

DECEMBER 2024

Lane, K. L., Baldy, T., Becker, T., Bradshaw, C., Dolan, V., Dymnicki, A., Freeman, B., Holian, L., Lemire, S., McIntosh, K., Moulton, S., Nese, R., Payno-Simmons, R., Porowski, A., & Sutherland, K. (2024). Teacher-Delivered Behavioral Interventions in Grades K-5 (WWC 2025001). Washington, DC: National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences, U.S. Department of Education. Retrieved from **https://whatworks.ed.gov/**.

This report is available on the IES website at **https://whatworks.ed.gov/**.

ALTERNATE FORMATS

The Alternate Format Center (AFC) produces documents in specific alternate formats, such as braille, large print, and electronic format for employees and members of the public with disabilities. These documents may include agendas, correspondence, course materials, regulations, and materials for public distribution.

Contact the AFC for submission guidelines and turnaround times. Hours of operation are Monday through Friday, 8:00 a.m. until 4:00 p.m., Eastern Time. For information, contact the AFC, Tena Witherspoon, **Tena.Witherspoon@ed.gov**, (202) 260-0818, or Tracey Flythe, **Tracey.Flythe@ed.gov**, (202) 260-0852.

As part of its mission, the U.S. Department of Education (Department) has a commitment, resources permitting, to making its publications available to all members of the public. If you have difficulty understanding English, you may, at no cost, request language assistance services for Department information by calling 1-800-USA-LEARN (1-800-872-5327) (TTY: 1-800-877-8339) or email us at **Ed.Language.Assistance@ed.gov**.

Table of Contents

Contents

List of Boxes

List of Tables

List of Examples

List of Figures

Introduction to teacher-delivered behavioral interventions in grades K–5

Students succeed in school environments that support them in demonstrating prosocial and expected behavior.[1] Student behaviors that disrupt or distract from classroom instruction can result in fewer learning opportunities for students, strained relationships between students and teachers, perceptions of unsupportive classroom and school environments, and decreased likelihood of academic success. Behavioral interventions can help students learn self-regulation skills, contributing both to their individual education success and to the success of their peers in the classroom.

Prosocial behavior refers to observable actions characterized by interacting with others, including peers and school staff, and behaving in ways to benefit other people.

Expected behavior describes the broad range of wanted, appropriate, on-task, or positive behaviors that support learning.

Challenging behavior refers to the broad range of unwanted inappropriate, off-task, or disruptive behaviors that the teacher is trying to reduce.

For the purposes of this guide, a **teacher** is any adult who helps children learn. This includes classroom teachers as well as paraeducators and volunteers.

Over the past 25 years, research and practical experience have supported investments in strategies to encourage all students to behave according to agreed-upon expectations. Many schools and districts are implementing schoolwide programs or frameworks that focus on instructional practices to identify and support prosocial and expected behaviors and to prevent challenging behaviors.[2] The widespread adoption and use of these programs and frameworks are encouraging, as there is growing evidence showing benefits for students, teachers, and schools.[3]

However, both teachers and students may benefit from low-intensity strategies that reinforce districtwide or schoolwide efforts but can be implemented more quickly and with fewer resources. Furthermore, there are still many districts and schools where schoolwide behavior expectations and programs have not been adopted. In these places, there is a need for teachers to have a set of low-intensity strategies to implement in their classrooms. In response, the What Works Clearinghouse™ (WWC), in conjunction with an expert panel, synthesized recent research into seven practical recommendations for teachers to use in their classrooms to support prosocial and expected behavior.

Purpose and scope

The purpose of this guide is to provide guidance on implementing teacher-delivered, low-intensity behavioral interventions in grade K–5 classrooms. The overarching aim of the recommendations is to help teachers support students in demonstrating expected behaviors in the classroom so that students and their classmates can engage in learning. The recommended strategies are intended to complement existing schoolwide behavioral programs and apply to both general education classrooms and separate classrooms. The recommendations also support the teaching of positive behaviors that students can generalize to other settings and relationships.

The panel emphasizes the importance of teachers implementing the recommended practices in school and classroom environments that are responsive to the personal experiences of all students and in which all students feel welcome and safe.

This practice guide is structured around seven recommendations. **Recommendation 1** introduces a process to co-establish, model, and teach clear expectations for student behavior consistent with schoolwide expectations (when these are present). **Recommendation 2** and **Recommendation 3** focus on practices to remind students to engage in expected behaviors and to acknowledge students when they demonstrate those expected behaviors. **Recommendation 4** and **Recommendation 5** focus on practices that offer instructional choices to students and provide opportunities for students to respond to and engage in learning activities. **Recommendations 6** and **7** focus on ways to teach students to self-monitor and reflect on their own behavior and to use behavior ratings to provide feedback to their peers.

See the **Glossary** for a full list of key terms used in this guide and their definitions. These terms are underlined and hyperlinked to the glossary when first introduced in the guide.

Who might find this guide useful?

The recommendations in this guide, especially Recommendations 1 to 3, are intended to be applied by classroom teachers with minimal resources or support from other school or district staff. Administrators, school-based mental health practitioners, related service providers, parents and other caregivers, and community members can use this guide to better understand low-intensity, teacher-delivered behavioral interventions. The evidence supporting the recommendations can facilitate conversations among researchers about the availability of rigorous evidence on best practices related to promoting expected behaviors and reducing challenging behaviors as well as gaps that should be addressed in future research.

The panel recognizes that this guide does not discuss strategies that require additional school-based staff beyond the classroom teacher to implement. The WWC plans to release a subsequent practice guide focused on intensive school-based behavioral interventions that require involvement from additional staff, such as school counselors, behavior analysts, social workers, instructional coaches, or researchers, to implement.

Overarching themes

Across the seven recommendations, the expert panel identified six overarching themes that are central to implementing teacher-delivered, low-intensity behavioral interventions in grade K–5 classrooms. The themes are as follows:

Theme 1. The importance of recognizing everyone's backgrounds and experiences

The research that supports the recommendations in this guide provides robust evidence for the effectiveness of certain strategies in encouraging prosocial behavior and reducing challenging behavior. Students and teachers come from a wide variety of cultural, racial, and linguistic backgrounds and have different

social experiences. The panel believes in implementing the recommended strategies in a way that reflects and values the backgrounds of the students, their parents and other caregivers, teachers, and community and provides meaningful opportunities for mutual learning about cultural diversity. Without appreciation for students' unique backgrounds, assessments of behavior that are deficit-oriented, such as those focused on the three Ds (defiance, disruption, and disrespect), may signal unawareness of or disrespect for a student's identity or culture.

Theme 2. The importance of fostering authentic relationships with students, parents, other caregivers, and community members

Foster authentic relationships

The panel emphasizes the importance of teachers fostering respectful, honest, and supportive relationships with students, parents, other caregivers, and school and community members through regular and varied opportunities that allow all parties to share their perspectives on student behavior. Having even one supportive student-teacher relationship is associated with a range of positive student outcomes[4] as well as a lower likelihood of students engaging in challenging behaviors.[5] These relationships can help a student feel valued and a part of the school community, which is positively associated with academic engagement and achievement.[6] Fostering respectful and supportive relationships between teachers and students may be especially important for students of color and other student populations (for example, LGBTQ+ students and students experiencing homelessness) who may experience prejudice at school and can become disengaged or disconnected from school, as well as for immigrant students, who may need to rely on their teachers more than others to navigate the U.S. school system.[7] Strong relationships with teachers can translate to more positive attention and better grades as well as the formation of positive behavior expectations for the future.[8]

For the purposes of this guide, a **caregiver** is a parent, guardian, family member, or other adult responsible for a child's well-being.

A key element of authentic relationships among students, parents, other caregivers, and teachers is bidirectional communication. This involves teachers having conversations with students and parents and other caregivers about what behavior expectations they want to exist in the classroom and how parents and caregivers can model or reinforce these behaviors in the home setting. It also involves inviting students and parents and other caregivers to participate in reviewing existing behavior expectations and developing new ones.[9] This process involves identifying where there may be misalignment in cultural values between teachers and families and collaborating on how to address these misalignments in the learning environment.

Theme 3. The importance of implementing strategies that teachers, students, and parents and other caregivers agree are reasonable

Reasonable practices

The panel believes in using strategies that work for teachers as well as students and their parents and other caregivers.[10] Before, during, and after implementing a strategy, this involves teachers considering the purpose of the strategy, what the delivery of the strategy requires from students and their parents and other caregivers, and assessing whether the strategy is acceptable to the students and their parents and other caregivers. This assessment builds on authentic

relationships with students, their parents, and other caregivers and involves honest dialogue by teachers with both students and parents and other caregivers about how and why the strategies will be implemented in the classroom.[11] The panel believes that considering the acceptance and endorsement of strategies can promote their successful implementation in partnership with students and their parents and other caregivers.

Theme 4. The importance of varying the intensity of behavioral strategies based on student needs

The panel encourages teachers to tailor the intensity of behavioral strategies to their students' needs. Specifically, the panel suggests that teachers identify the strengths and challenges of their students in demonstrating expected behaviors and choose which strategies to implement based on that assessment. For example, whereas some students may need frequent, strong reminders to engage in expected behaviors, other students may need less frequent and lighter reminders to do so. Individual needs can vary across students and evolve over time. The panel emphasizes the importance of teachers using their expertise, their knowledge of the needs of their students, and the school and classroom context to determine what strategies best meet their students' needs.

Theme 5. The importance of supporting teachers through training and ongoing coaching

While this practice guide focuses on low-intensity strategies, thoughtful planning, training, and in some cases ongoing coaching is still required for successful implementation. Sometimes overlooked, adequate planning for implementing these strategies can involve training on the strategy and required materials, such as an app to solicit a behavior rating or response cards to motivate student engagement.[12] A few of the reviewed studies involved ongoing coaching, where an experienced teacher or someone outside the school provides one-on-one coaching to support teachers in implementing the strategy. Not all teachers will need the same type of support. Newer teachers might benefit from more intensive initial training. Other teachers might benefit from additional coaching once they begin implementing a strategy so they can ask specific questions about the challenges they are facing. Training and support can evolve over time as teachers become more skilled in implementing these strategies and try to generalize the strategies to contexts outside of their classroom.

Theme 6. The importance of engaging in ongoing reflection and data-informed decisionmaking

The panel believes in the value of engaging in ongoing reflection and data-informed decisionmaking to evaluate strategy implementation. The extent to which a strategy is being implemented as intended–also referred to as fidelity of implementation–can fluctuate over time as teachers become more proficient at implementing these strategies or other classroom priorities become more or less important. Where feasible, teachers' ongoing reflection should occur in partnership with other school staff and in dialogue with students and their parents and other caregivers to gain insights into how the implementation of these strategies is going and how improvements can be made. The extent to which both students and parents and other caregivers are active partners in the implementation of these strategies will vary depending on the context. The panel believes

that continuous and collaborative reviewing of implementation data promotes a culture of learning, where gaining and sharing knowledge and new information is prioritized, valued, and rewarded.[13]

Using evidence to develop the recommendations

The WWC convened a panel of experts to guide the development of this practice guide. The panel includes experts in behavioral analysis and special education research, practitioners who deliver or oversee delivery of programs focused on student behavior, and researchers who design and study culturally responsive practices. The expert panel identified seven recommendations based on the available evidence. **Box I.1** describes the process for determining the evidence.

Box I.1. Process for determining evidence for recommendations

A systematic literature search was conducted to identify studies that were potentially relevant to the purpose of this guide. Studies identified in the search were screened and reviewed to determine whether they meet What Works Clearinghouse standards. Studies that meet standards were used to inform and provide evidence for the recommendations.

Although some panel members authored articles or interventions that appear in the studies used as evidence for this guide, none of the panel members was involved in evaluating the quality of those studies.

Additional details on the study search and review process are available in **Appendix B**.

The studies that provide evidence for the recommendations were conducted in a variety of urban, rural, and suburban settings and included students from racially/ethnically diverse families. The students who participated in the reviewed studies were diverse, but boys, students with disabilities, and Black and Hispanic students were overrepresented. Many studies included students from low-income families. All studies were conducted in elementary schools in the United States and Canada, including both general education schools and schools for students needing additional support. Though some of the recommendations are primarily based on single-case design studies with a small number of students in general education classrooms, the panel believes the recommendations derived from these studies remain generalizable to various school and classroom settings.

Each recommendation includes instructional practices and a short summary of the research evidence that supports the recommendation. **Box I.2** describes the levels of evidence. **Table I.1** shows the seven recommendations and the level of evidence for each recommendation.

Box I.2. Levels of evidence

Minimal: Evidence may not meet What Works Clearinghouse (WWC) standards or may exhibit inconsistencies, but the panel determined that the recommendation must be included, and the practices are based on strong theory, are new and have not yet been studied, or are difficult to study with a rigorous research design.

Moderate: There is some evidence meeting WWC standards that the practices improve child outcomes, but there may be ambiguity about whether that improvement is the direct result of the practices or whether the findings can be replicated with a diverse population of children.

Strong: There is consistent evidence that meets WWC standards and indicates that the practices improve outcomes for a diverse child population.

More detailed information can be found in **Appendix B** and **Appendix C**.

Table I.1. Recommendations and corresponding levels of evidence

	Level of Evidence		
Practice Recommendation	**Minimal**	**Moderate**	**Strong**
1. Co-establish, model, and teach clear expectations for student behavior consistent with schoolwide expectations.			●
2. Remind students to engage in expected behaviors.			●
3. Acknowledge students for demonstrating expected behaviors through positive attention, praise, and rewards.			●
4. Offer instructional choices to students to increase engagement and agency.		●	
5. Provide students frequent and varying opportunities to respond to and engage in activities.		●	
6. Teach students to monitor and reflect on their own behavior.		●	
7. Use behavior ratings to provide feedback to students.			●

How to use this practice guide

The panel encourages teachers to use this practice guide to enhance their existing practices or to adopt new practices that they have not used before to support students in demonstrating expected behaviors. The recommendations are intended to be used in a single classroom over the course of the year, starting with a process at the beginning of the school year to co-establish, model, and teach clear expectations for student behavior (**Recommendation 1**). It is important that teachers, students, and their parents and caregivers co-establish expectations that consider the personal experiences of members of the school community. The panel also emphasizes the importance of reinforcing the established behavior expectations through reminders, positive acknowledgement, praise, and rewards (Recommendations **2** and **3**). In this way, the panel views Recommendations 1-3 as the

foundation for supporting students in demonstrating expected behaviors. Building on this foundation, the panel encourages teachers to implement one or more of Recommendations **4**, **5**, **6**, and **7** based on the needs of their students.

The panel emphasizes the importance of teachers using their expertise, their knowledge of the needs of their students, and the school and classroom context to choose relevant practices to implement. Each of the panel's practice recommendations includes the following sections:

- **Recommendation:** This guide includes details about each of the recommended practices (What is it?) and a summary of the evidence supporting the recommendations (Why do it?). **Appendix C** contains a detailed rationale for the level of evidence for each recommendation, with supporting details from individual studies.
- **How do we do it:** The steps in these sections provide guidance on how to implement the recommended practices. This guidance is informed by the studies that support the recommendations in concert with the panel's expertise and knowledge of K–5 education. Examples are included to give the reader ideas for how to implement the recommended practices. Examples are not intended to endorse specific products for purchase.
- **Potential obstacles and the panel's advice:** The panel offers suggestions for addressing potential challenges to implementation.

Recommendation 1: Co-establish, model, and teach clear expectations for student behavior consistent with schoolwide expectations

What is it?

Teachers can proactively address students' behavioral needs by establishing a supportive classroom climate guided by positive behavior expectations. Ideally, these behavior expectations are connected to schoolwide expectations that are implemented across the school *and* in individual classrooms.[14] Knowledge of community norms and students' cultural backgrounds; teachers' prior experiences and frames of reference; and the strengths, values, and preferences of students and their families can inform the development of these behavior expectations.[15]

Behavior expectations should be observable, measurable, positively stated, understandable, always applicable, and aligned with the school's standards and culturally responsive practices.

Why do it?

Co-establishing expectations with students, parents, and other caregivers helps to build consistency between the home, school, and classroom environments and allows students to understand where the expectations come from and why they are important. Clear and consistent expectations across home and school settings can benefit students by guiding them towards positive behavior. Engaging students in conversations about what the identified behavior expectations "look like" and formulating the expectations in the students' language empowers the students to take ownership of the behavior expectations.

Co-establish refers to developing a shared set of behavior expectations in dialogue with students, parents, and other caregivers.

Clear behavior expectations are foundational to the other recommendations in this practice guide. This recommendation presents steps for cocreating, teaching, and modeling clear behavior expectations, and then adjusting or revisiting the expectations if students are not meeting them. The steps also describe how to start with schoolwide behavior expectations if these are available and what to do if schoolwide expectations do not exist. Once developed, behavior expectations can be reinforced using the strategies highlighted in the other recommendations.[16] For example, teachers can remind students to engage in expected behaviors and acknowledge them for demonstrating expected behaviors that are articulated as clear behavior expectations (**Recommendations 2** and **3**). Teachers can also teach students to monitor and reflect on their own behavior and provide feedback using behavior ratings that are aligned with the clear behavior expectations (**Recommendations 6** and **7**). As described later in this recommendation, behavior expectations can be revised throughout the school year.

The What Works Clearinghouse and the expert panel characterized this recommendation as supported by strong evidence, based on 14 studies of the effectiveness of developing and using clear behavior expectations for students.[17] Eight studies meet WWC standards without

reservations,[18] and six studies meet WWC standards with reservations.[19] See **Appendix C** for a detailed rationale for the Level of Evidence for Recommendation 1.

How do we do it?

Clear behavior expectations should, if possible, be developed at the beginning of the school year and should be consistent with schoolwide expectations. Plan to reteach and revisit expectations on an ongoing basis throughout the school year, with refreshers after school breaks and holidays. Developing behavior expectations requires planning and time, especially when codeveloping expectations with students, parents and other caregivers, and school staff. Clear behavior expectations are relevant in both general education and separate classrooms. As described in this chapter, behavior expectations may differ by student age and ability level. The panel emphasizes that behavior expectations apply to teachers, as well. Teachers should model the behavior expectations through their interactions with their students.

Implementation Steps

The panel recommends the following implementation steps for setting clear behavior expectations:

1. Start with schoolwide expectations if available
2. Co-establish and post classroom behavior expectations
3. Teach clear behavior expectations
4. Adjust instruction and revisit behavior expectations if expectations are not being met

1. Start with schoolwide expectations if available

Reasonable practices

If schoolwide expectations are in place, start with these when thinking about classroom behavior expectations. Usually, schoolwide expectation matrices are uniform across all classrooms and key school settings such as the cafeteria, playground, and library (see **Example 1.1** for an example of a school expectation matrix). Involving all interested individuals such as principals, general and special education teachers, related service providers, school-based mental health practitioners, parents and other caregivers, and students in creating schoolwide expectations can ensure the development of culturally and developmentally relevant expectations.[20] Create opportunities for bidirectional conversations with parents and other caregivers on how to model and reinforce schoolwide expectations.

Bi-directional conversation refers to interactive dialogue between teachers, students, parents, and other caregivers where all participants are encouraged to share information and ideas, and especially to listen to what each other has contributed.

Students are expected to follow certain cultural and behavioral norms at home. Engage parents and caregivers during one-on-one conversations to ask them if they have any questions about the expectations and whether they align with their own values at home. Consider asking parents and other caregivers to complete the *Schoolwide Expectations*

Survey for Specific Settings (SESSS).[21] The SESSS supports schools in including multiple perspectives when building behavior expectation matrices. Other IES-funded publications provide additional guidance on developing schoolwide expectations.[22]

Example 1.1. School expectation matrix

School Expectations	Setting/Routine				
	All Settings	Hallways	Playground	Cafeteria	Library
We Respect Ourselves	• Be engaged • Give your best effort • Ask for help when you need it	• Walk • Go directly to your destination	• Have a plan • Do something you enjoy • Play safely	• Eat only your food • Select healthy foods	• Use resources to support your learning • Focus on your own work
We Respect Others	• Be kind • Keep hands, feet, and objects to self • Help others when they ask • Share with others	• Use a quiet voice • Walk to the right	• Include others • Share equipment • Take turns	• Wait for your turn to talk • Include everyone in conversations • Connect with new people	• Whisper • Return books • Help others stay focused
We Respect Property	• Recycle • Clean up after self • Leave the space better than you found it	• Pick up litter • Maintain physical space	• Use equipment properly • Put litter in garbage can	• Take care of your belongings • Clean up eating area	• Push in chairs • Treat books carefully

Source: **https://www.pbis.org/resource/creating-a-classroom-teaching-matrix**

2. Co-establish and post classroom behavior expectations

Recognize background

Foster authentic relationships

When revising or developing new classroom behavior expectations, identify a set of expectations that are observable, measurable, positively stated, always applicable, and culturally relevant. **Example 1.2** presents guidelines for developing behavior expectations. Partner with parents and other caregivers and students to create a shared vision for what learning and success look like in the classroom and ensure the cultural relevance of the expectations. Cocreating classroom behavior expectations with students and their parents and other caregivers can promote belonging, student ownership, student agency, and a positive learning environment.[23]

Teachers can co-establish behavior expectations with students and their parents and caregivers by having conversations, either in small groups or in the classroom, about the alignment of classroom expectations and home expectations. This is an activity that can be done at the start of the school year and revisited as needed as part of back-to-school, open house, mid-term, or other parent and caregiver meetings.

The goal of discussions about classroom expectations is to highlight the alignment of what teachers, students, and their parents and other caregivers see as expected behaviors in the classroom and at home. This connection is especially important for students and their parents and other caregivers who have historically had negative interactions with schools. It can be powerful for students to see their parents and other caregivers talking with teachers and helping to build classroom expectations to match home expectations.

Teachers should be prepared to state the guidelines for developing behavior expectations with students and their parents and other caregivers to give them a framework for thinking about expectations. Teachers can share their philosophy around teaching, modeling, and reinforcing expected behaviors and may highlight their desire to align classroom expectations with home expectations to better set students up for success.

Example 1.2. Guidelines for developing behavior expectations

- Define 3-5 expectations. There should be 3-5 expectations and, if possible, the expectations should be essentially the same across settings (for example, cafeteria and classroom). See classroom expectation matrix in **Example 1.3**.
- State expectations positively. Try to tell children what to do rather than what not to do. For example, say "*Ask permission before taking something from a friend*" instead of "*Don't take things from others*."
- Be simple and specific and use developmentally appropriate language. For example, say "*Use your inside voice*" for first grade students rather than "*Talk quietly when you are inside the school*."
- Define observable and measurable goals. Students need to have a clear definition of what each behavior looks like in their classroom. It's easier to observe "*Return everything to its proper place*" than "*Keep things tidy*."

Source: Adapted from **https://iris.peabody.vanderbilt.edu/module/ecbm/cresource/q1/p03/#content**

Reasonable practices

Within a classroom, behavior expectations might look different depending on the instructional activity or a student's emotional state. **Example 1.3** illustrates this point by presenting a classroom expectation matrix with different expectations when students enter and leave the classroom; when students engage in small group instruction, whole group instruction, or independent worktime; and when a student is upset. If schoolwide expectations exist, consider adapting them for the classroom to account for the developmental level of certain students. For example, expected behaviors may differ for students in kindergarten versus grade 3 or for classrooms serving students with extensive needs for support.

Teachers should also consider cross-cultural nuances of behaviors. For example, eye contact is respectful in some cultures and disrespectful in others. Additionally, behavior expectations need to be sensitive to disability issues as well as cultural issues. For example, some children with autism have an easier time listening and communicating if they do not look someone directly in the eyes. Having codeveloped expectations can help to address some of these nuances. Cocreating expectations with students promotes a classroom environment that is responsive to student needs and backgrounds and that signals the classroom is a safe space for students socially, culturally, psychologically, and emotionally.

Example 1.3. Classroom expectation matrix

School Expectations	Setting/Routine				
	Entering and Leaving the Classroom	Small Group Instruction	Whole Group Instruction	Independent Work Time	When You Are Upset
We Respect Ourselves	• Walk • Go directly to your destination	• Participate • Bring necessary materials to the table	• Engage with the lesson • Take notes	• Make a plan • Read or listen to directions • Focus on your own work	• Notice when you feel frustrated, confused, or uncertain • Take 3 deep breaths • Ask for help
We Respect Others	• Use a quiet voice • Walk on the right side of the hallway	• Include others • Share materials	• Raise your hand if you have something to ask or share	• Whisper • Focus only on your tasks	• Talk calmly • Listen to other people's perspective • Take a break if you need one
We Respect Property	• Pick up litter • Maintain physical space	• Leave group materials at the table • Use materials carefully	• Sit in your seat safely • Have necessary materials handy	• Share classroom materials with others • Return materials where you found them	• Put materials down and walk away • Ask for help

Source: **https://www.pbis.org/resource/creating-a-classroom-teaching-matrix**

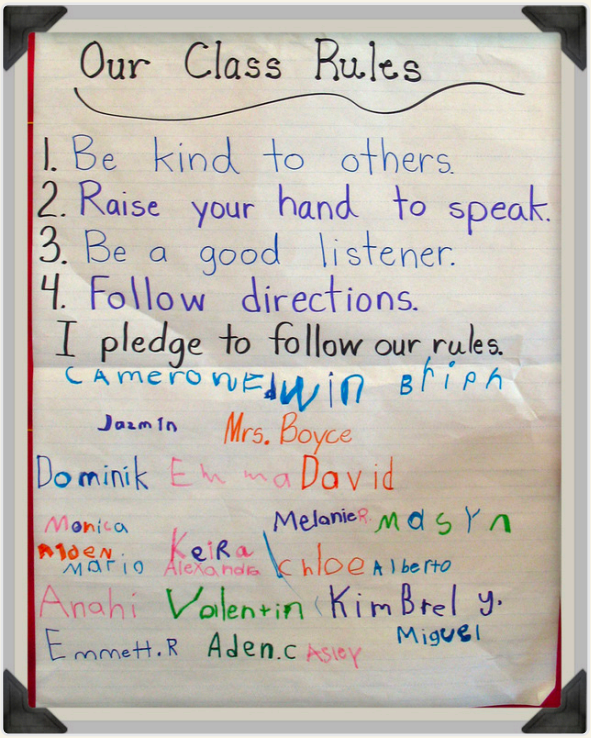
Teachers can also engage students in conversations about what the identified behavior expectations "look like" in their classroom through class discussions and student shares. For example, if the class expectation is to "Be Respectful," teachers can ask their students what being respectful means to them.[24] This **illustrative lesson plan** provides step-by-step guidance on cocreating classroom expectations in line with schoolwide expectations. Engaging students in identifying what behaviors they dislike and what behaviors they want to see more of in the classroom allows students to understand where the expectations are coming from and why they are important. Formulating the expectations in the students' language and illustrating expectations using their own examples empower the students to take ownership of the behavior expectations.

Once developed, encourage students to create visuals for shared expectations by writing, drawing, taking pictures of themselves, finding pictures on the internet or in magazines of examples and counter-examples of the expected behaviors. Display these in the classroom so that students have a reminder of the classroom expectations they helped develop. Students can see they are being represented, and this can help to build a welcoming, supportive, inclusive classroom environment.

Finally, post the expectations in the classroom through visuals at the students' eye level. If there are schoolwide expectations, there should also be visual representations throughout the school. **Example 1.4** provides examples of posters with classroom behavior expectations codeveloped with students. Combine different types of visual supports such as photographs and line drawings to accommodate a variety of student needs and abilities. This can particularly help students who are English learners.

See the fourth implementation step below if behavior expectations need to be revised or modified during the school year.

Example 1.4. Posters of classroom expectations



Source: **https://www.pinterest.com/pin/554294666632382697/**; **http://joanboyce.weebly.com/class-rules.html**

3. Teach clear behavior expectations

After establishing behavior expectations, model and continually teach them. Direct teaching and ongoing review can help students learn the language, contexts, and behaviors that make classroom (and schoolwide) expectations effective.[25] Teach clear behavior expectations by frequently recognizing and acknowledging students' positive behavior; explicitly restating students' appropriate behavior; and consistently reinforcing the behavior of students who meet expectations during classroom instruction, interactions, and transitions. **Example 1.5** lists several strategies for teaching behavior expectations to students.

The panel recommends teaching expectations at least daily for the first three weeks then monthly, with refreshers after each school break and holiday.

Example 1.5. Strategies for teaching expectations

There are many ways to teach behavior expectations. For example, teachers can:

Model expectations. Model clear behavior expectations by explicitly acknowledging when and how students are demonstrating classroom expectations.

Restate expectations/prompt students to practice. Focus on frequently recognizing and acknowledging students' expected, positive behavior by explicitly restating students' appropriate behavior, efficiently prompting and encouraging demonstration of these behaviors (see **Recommendation 2** for more details), and consistently showing appreciation for such behavior in your classroom (see **Recommendation 3** for more details). This can occur seamlessly throughout the day, week, and school year.

Provide feedback to students. Students can receive feedback on their demonstration of each behavior expectation during planned practice opportunities that occur more frequently when behavior expectations are first established and less regularly (but as needed) throughout the rest of the school year (see **Recommendation 7** for more details).

Promote generalization of expectations. Acknowledging appropriate behavior can expand students' understanding of the nuances of behavior expectations as well as how to generalize the related skills learned through the behavior expectations to other contexts. Acknowledging appropriate behavior can increase opportunities for students to learn new and alternate ways of behaving appropriately in different settings.

Use consistent expectations across the school. This will help all adults—as well as students and caregivers—be clear on expected behaviors, creating an opportunity for adults to teach, practice, and acknowledge expected behaviors. This also allows students to receive feedback from multiple adults, including adults beyond the classroom (for example, custodian, culinary staff, substitute teachers).

Source: Adapted from **https://iris.peabody.vanderbilt.edu/wp-content/uploads/pdf_case_studies/IRIS_establishing_classroom_norms_and_expectations_case_study.pdf**

4. Adjust instruction and revisit behavior expectations if expectations are not being met

Reflecting with data

Adjust practices if certain behavior expectations are not being met, and revisit the relevance of behavior expectations throughout the school year with students, parents and other caregivers, and other staff. Every quarter, ask students and parents and other caregivers how they interpret and put into practice the behavior expectations. This might be done during parent-teacher conferences halfway through the school year, where classroom expectations can be revisited with parents and other caregivers during one-on-one conversations to ask them if they have any questions about the expectations and whether the expectations align with their own values at home. If there is any type of classroom newsletter/home-school communication, teachers can share the class expectations with parents and other caregivers, particularly those they may not have had an opportunity to connect with in person. Consider revising or revisiting expectations based on feedback received and what occurs in the classroom. Integrate this feedback into ongoing monitoring and continuous improvement of the behavior expectations.

Potential obstacles and the panel's advice

OBSTACLE: *My school does not have schoolwide behavior expectations.*

PANEL'S ADVICE: Having consistent schoolwide expectations that support expected behaviors within and outside of school is beneficial. However, teachers can and should establish their own classroom expectations in partnership with interested individuals (such as co-teachers, paraeducators, administrators, students, and parents and other caregivers) if a schoolwide system of expectations is not present.

OBSTACLE: *I do not know how to go about developing behavior expectations.*

PANEL'S ADVICE: Technical Assistance centers established by the U.S. Department of Education's Office of Safe and Supportive Schools and Office of Special Education Programs have resources for developing expectations, including the classroom expectation matrices reproduced above.[26] It is important to frame behavior expectations as positive actions, to acknowledge effort, and to treat each student fairly. Seek input from all students in the classroom, as opposed to only a select group of high-achieving students, about what behavior expectations should be. Encourage teams of teachers, staff, school leaders, and parents and other caregivers to complete the *Schoolwide Expectations Survey for Specific Settings* (SESSS).[27] The SESSS supports schools in including multiple perspectives when building behavior expectation matrices.

OBSTACLE: *Some parents and other caregivers have different norms and behavior expectations.*

PANEL'S ADVICE: In working with parents and other caregivers who may have different norms and behavior expectations from one another and from the teacher, the panel recommends finding common ground. Teachers can emphasize being on the same team and working towards what is best for each parent's and other caregiver's child and all children in the classroom, supporting them in being safe and thriving at school (for example, "Our goal is the same…"). Consider how to honor the parents' and other caregivers' perspectives of their child's development and care, while explaining the teacher's responsibilities as they relate to each child and all of the children in the classroom.

OBSTACLE: *It's the middle of the school year and I have not yet established clear behavior expectations.*

PANEL'S ADVICE: Though it is advisable to develop behavior expectations in the beginning of the school year, expectations can be established later in the school year if necessary. Teachers can have a meeting with their students, and during this meeting discuss their goals for understanding the culture of the classroom, aligning their expectations with the existing expectations for the students, soliciting feedback from the students, and developing a shared set of expectations with the students. If the teacher and the students feel like these expectations were cocreated, students are more likely to feel ownership of the behavior expectations.[28] Regularly revisiting and reteaching behavior expectations is particularly important after school breaks. If there are schoolwide expectations, teachers should cocreate classroom expectations with students based on the schoolwide expectations.

OBSTACLE: *It's late in the school year, and my students are not demonstrating expected behaviors.*

PANEL'S ADVICE: Review available administrative data (such as office discipline data) to determine times of day, times of the year, and locations when a student or a group of students seem to be having the most difficulty with behavior expectations. Use this information to make plans for reteaching expected behaviors and using other strategies (for example, precorrection) to support students in engaging in expected behavior (see **Recommendation 2** for examples of precorrections). Discuss with the principal, other teachers, students, and parents and other caregivers why certain behavior expectations are not being followed. Identify ways to revise behavior expectations to better reflect how students and parents and other caregivers are defining success. For behavior expectations that are challenging for students to meet, remind students to demonstrate the expected behavior (see **Recommendation 2**), and increase acknowledgements when students successfully meet expectations (see **Recommendation 3**).

Reflection Questions

List ways that your school defines or describes behavior expectations for students. Now list ways that you define behavior expectations for students in your classroom. How can you better align your classroom expectations with schoolwide expectations? How could you involve students and parents and other caregivers in conversations about this?

Recommendation 2: Remind students to engage in expected behaviors

What is it?

To help students build self-awareness and self-regulation skills, teachers may need to remind them throughout the school day to engage in appropriate behaviors. Providing precorrections is an easy-to-use strategy that involves explicitly requesting a student to engage in a specific expected behavior. The purpose of precorrections—also referred to as "prompts" or "reminders"—is to describe what is expected of students in a way that is easily understood. The precorrections can take the form of a gesture, such as pointing to the crayons when students are asked to draw; a visual, such as providing written instructions for how to engage in group work; or a verbal precorrection, such as explaining to students how to engage in a specific activity.

A **precorrection** is a reminder that guides a student to engage in a specific expected behavior during an activity. Precorrections can be delivered immediately prior to a new activity or task to prepare a student to engage in expected behaviors. A precorrection guides students on how to approach a new task or situation or one where they typically struggle to be successful.

Why do it?

When the teacher delivers a precorrection, they identify what may be challenging for the student and explicitly guide the student towards the expected behavior. Precorrections encourage the student both to reflect on their own behavior and to engage in the expected behavior. In this way precorrections promote self-awareness and self-regulation by helping students see a connection between their actions and what happens next, especially if the positive behavior is reinforced by immediate praise. The end goal is for the student to engage in the expected behavior independently in other appropriate situations without needing to be reminded. In this way, precorrections are also preventive, in that teachers can use them to prevent challenging behaviors from occurring in the future.[29]

The panel recommends using precorrections to promote expected behaviors that are consistent with schoolwide and classroom expectations (see **Recommendation 1**). Precorrections are ideally paired with acknowledgments in the form of positive attention, praise, and rewards (see **Recommendation 3**). The steps in this recommendation outline how to select expected behaviors to focus on, how to consider different types and levels of precorrections, how to deliver precorrections using supportive language, and how to reinforce and ask for student feedback on delivered precorrections. Teachers should adjust the intensity and frequency of precorrections depending on a student's need to be reminded of expected behaviors.

The What Works Clearinghouse and the expert panel characterized this recommendation as supported by strong evidence, based on 13 studies of the effectiveness of practices to remind students to engage in expected behaviors.[30] Seven studies meet WWC standards without reservations,[31] and five studies meet WWC standards with reservations.[32] See **Appendix C** for a detailed rationale for the Level of Evidence for Recommendation 2.

How do we do it?

Providing precorrections can be integrated into learning activities with limited preparation and materials. Teachers can deliver precorrections immediately prior to or during activities, transitions, or tasks throughout the school day. Precorrections can be used with individual students, a group of students, or an entire class in both general education and separate classrooms. As described in this chapter, the frequency and intensity of precorrections can vary across students of various ages and ability levels. Teachers can fade the precorrections over time as students engage in the expected behaviors on their own.

Implementation Steps

The panel recommends the following implementation steps for using precorrections:

1. Select the expected behaviors to focus on for specific times and transitions during the school day
2. Consider the type and level of intensity of the precorrections to use
3. Deliver precorrections using supportive and action-oriented language
4. Reinforce delivered precorrections by providing immediate acknowledgment of students engaging in expected behaviors
5. Ask students for feedback on which precorrection approaches they prefer

1. Select the expected behaviors to focus on for specific times and transitions during the school day

The school day offers many opportunities to deliver precorrections. Precorrections are ideally focused on expected behaviors for specific contexts where students may need extra guidance on how to engage in activities and with one another. Take time to think about the transitions or times throughout the day when students typically struggle. For example, is it difficult for students to stay engaged during 90-minute English and Language Arts (ELA) instruction blocks? Do students spend too much time off topic during cooperative learning groups? Are students too loud coming back into class from recess? Selecting which contexts and behaviors to focus on is an important first step towards developing effective precorrections. The specific times and challenging behaviors may differ across students.

Reasonable practices

The panel recommends engaging students and their parents and other caregivers in deciding which behaviors to focus on and what types of precorrections to use. Students are expected to follow certain cultural and behavioral norms at home. If teachers are aware of those norms, they are in a better position to promote behaviors expected at school and use precorrections that are culturally responsive to, and inclusive of, all the students in their classroom. The panel recommends using a behavior expectation matrix to ensure that classroom behavior expectations are aligned with schoolwide behavior expectations (as illustrated in **Examples 1.2** and **1.4** under **Recommendation 1**).

2. Consider the type and level of intensity of the precorrections to use

There are many different types of precorrections, as illustrated in **Example 2.1**. The panel recommends tailoring the type and intensity of precorrections to specific student needs. Precorrections can be directed at individual students or groups of students. In general, the panel recommends using group precorrections first and then following up with individual precorrections for students who have greater need for support.

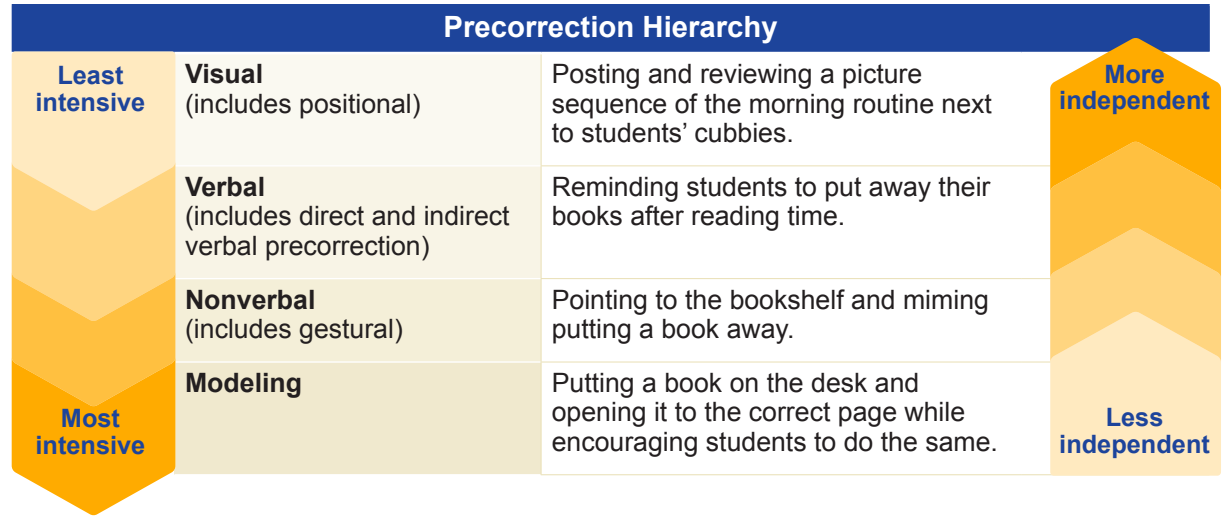
Example 2.1. Types of precorrections

- **Visual precorrections** include pictures, written instructions, schedules, and other objects, such as using a checklist for expected classroom behavior during circle time.
- **Verbal precorrections** include guiding statements, questions, and hints about expected behaviors, such as reminding students to raise their hands. Questions can including asking students to describe or explain expected behaviors, including what steps students should take for different activities.
- **Nonverbal precorrections** include pointing to, looking at, motioning, gesturing, or nodding to indicate an expected behavior, such as pointing to written instructions for expected behaviors when coming back from recess.
- **Modeling precorrections** involves showing or acting out the expected behaviors, such as modeling how to wash hands after coming back from recess.

Source: Adapted from Neitzel & Wolery, 2009.

Precorrections range in intensity from least intensive (visual precorrections) to most intensive (modeling precorrections). The hierarchy provided in **Example 2.2**, developed for use with children with autism, illustrates levels of intensity for different types of precorrections. Precorrections can increase or decrease in intensity.[33] For establishing a behavior, start with a precorrection that is as minimal as possible, such as a gesture to remind students to raise their hands during circle time. If the initial precorrection is not effective, increase the intensity of the precorrection by repeating the gesture and adding a verbal precorrection, *"Remember to raise your hand."* If students engage in expected behaviors at a specific level of precorrection, slowly decrease the intensity by using less intensive precorrections to see if the students continue to demonstrate the behavior without a precorrection.

Example 2.2. Precorrection hierarchy



Source: https://theautismhelper.com/use-prompts-effectively-efficiently/

Example 2.3 provides an example of a teacher working with children with autism moving from least to most intensive precorrections in a learning activity with multiple, sequenced steps.

Example 2.3. Least to most intensive precorrections for handwashing

Precorrections can be useful in teaching new skills. Least to most precorrections can also help build independence. In the classroom, students may be expected to wash their hands before going to lunch.

Visual: To help teach and reinforce this behavior, hang a poster next to the sink that lists the steps for washing hands.

Verbal: Before heading to lunch, you could ask, "What do you need to do before going to lunch?" If the student goes to the sink, but is unsure of the steps, you can remind the student by saying, "Remember, the first step is to turn on the water."

Gesture: You can help the student see the relevant materials by gesturing. You might point to the soap while saying, "Remember, put soap on your hands."

Model: You can show the student how to complete a step by demonstrating how to scrub hands by scrubbing your hands together in the student's line of vision while saying, "Scrub your hands."

Source: Adapted from National Professional Development Center on Autism Spectrum Disorders, n.d.

3. Deliver precorrections using supportive and action-oriented language

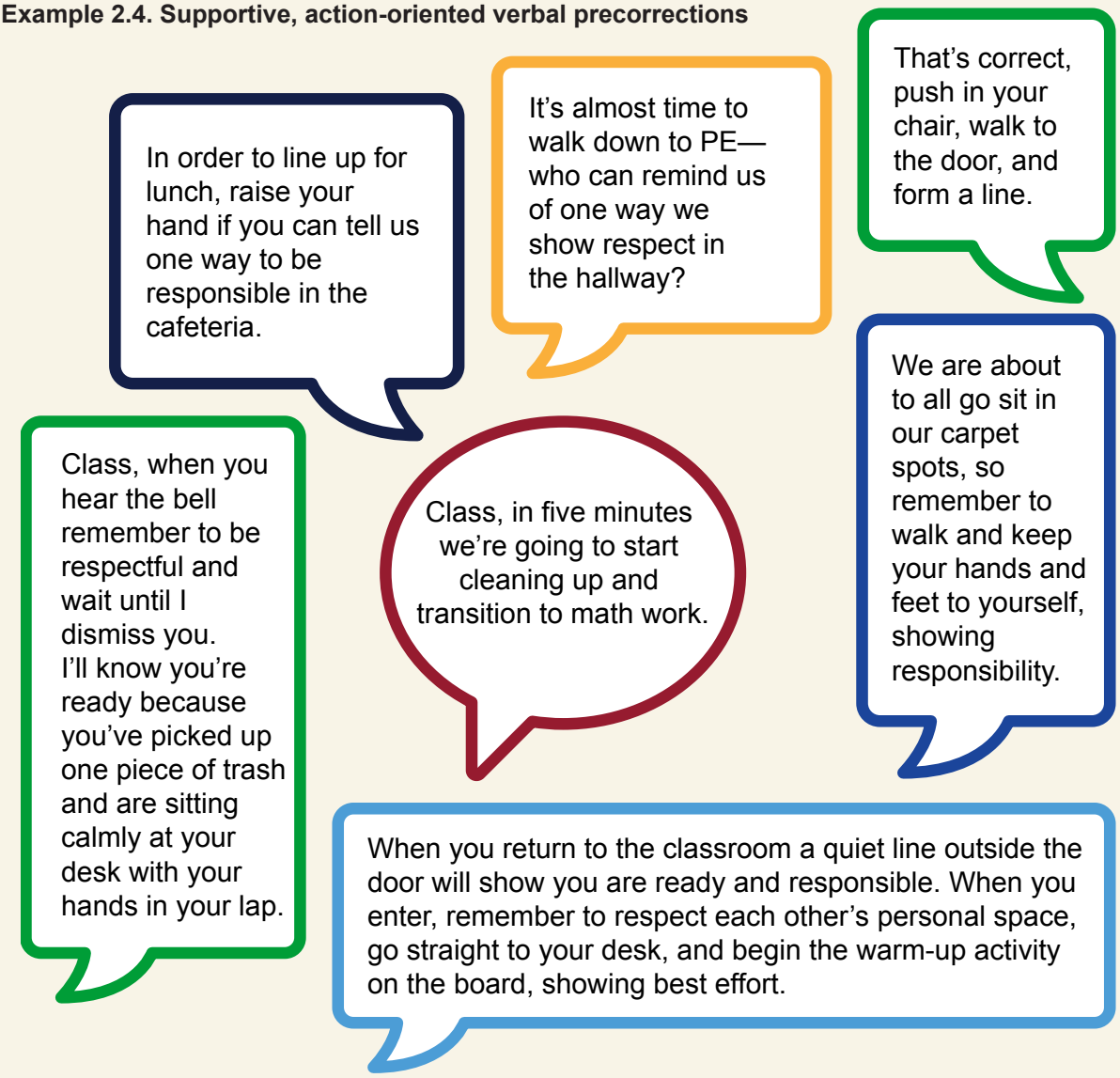
Precorrections are ideally delivered in, and reinforcing of, a supportive learning environment. The panel believes it is important to deliver precorrections in a positive, warm, and supportive manner and to use action-oriented language. For example, before starting circle time, smile warmly and say, *"Remember, we need to be active listeners during circle time and stay quiet when the teacher is talking."* **Example 2.4** provides examples of supportive, action-oriented precorrections. Calling a student out for challenging behavior is not considered a precorrection.

Calling out versus precorrections—what is the difference?

Calling out means bringing attention to an individual or a group of students' challenging behaviors. For example, a teacher may ask a student, "Why are you not sitting at your desk"? Calling out students can cause them to feel singled out and reinforce challenging behaviors.

Precorrections offer an alternative to calling out students. Precorrections focus on positive behaviors and guide the students toward engaging in them. In this way, teachers can potentially prevent challenging behaviors from happening and facilitate positive behavior in the classroom.

Example 2.4. Supportive, action-oriented verbal precorrections



Source: **https://ci3t.org/tier_library/pc/02_PC_Example_Statements.pdf**

4. Reinforce delivered precorrections by providing immediate acknowledgment of students engaging in expected behaviors

Providing precorrections is a means of explicitly showing students what to do and ensuring successful completion of tasks with the end goal of students continuing to engage in desired behaviors without being reminded. The panel recommends reinforcing precorrections by providing students an opportunity to practice the expected behavior and by immediately acknowledging students engaging in expected behaviors. For example, precorrect students for a desired behavior before an activity, then remind them to engage in the behavior during the activity, and finally praise them for engaging in the behavior. Opportunities to engage in expected behaviors supported

by positive acknowledgment can help students understand how to behave successfully in other situations.[34] See **Recommendation 3** for examples of how to acknowledge students for demonstrating expected behaviors through positive attention, praise, and rewards.

Over time, as students engage in the expected behaviors independently, the precorrections can be faded. **Example 2.5** illustrates two fading strategies for students learning basic tasks. Throughout the fading process it is essential to continue monitoring and to praise student behavior, to ensure expected behavior is maintained.

Example 2.5. Fading precorrection

Least to most precorrection fading	Most to least precorrection fading
Ms. Thompson is using least to most precorrection to teach Sadie how to sharpen her pencil in the electric pencil sharpener. The first day, Ms. Thompson gave Sadie a dull pencil. When Sadie did not do anything, Ms. Thompson said, "Go sharpen your pencil." When Sadie did not respond, Ms. Thompson placed the pencil sharpener closer to her. When Sadie did not respond, Ms. Thompson put the pencil in her hand closer to the sharpener. Sadie pushed the pencil in and sharpened the pencil. Ms. Thompson immediately praised Sadie for sharpening the pencil. The next day, Ms. Thompson did everything the same way, but this time Sadie sharpened the pencil when Ms. Thompson placed the sharpener closer to her. Ms. Thompson immediately praised her. The following day, with everything the same, Sadie sharpened the pencil when Ms. Thompson gave her the verbal precorrection. Ms. Thompson immediately praised her.	Mr. Donovan is teaching Jonathan to clear his lunch tray using most to least precorrection. He says to the class, "Lunch is done." For three days, he provides a full physical precorrection and puts Jonathan's hands on the tray and walks with him to the garbage with his hands over Jonathan's hands to guide the motion. After three days Mr. Donovan uses partial physical precorrection. He puts Jonathan's hands on the tray and guides him to the garbage by gently touching his elbow. After three days, he now uses modeling. Mr. Donovan gets his own tray and has Jonathan follow him to the garbage and models dumping the lunch tray. After three days of modeling, Mr. Donovan uses a visual cue of Jonathan dumping his lunch tray. He shows Jonathan the photo and Jonathan dumps the tray in the garbage. Mr. Donovan immediately praises Jonathan. Next Mr. Donovan uses verbal precorrection, saying, "Lunch is done—Jonathan, dump your tray." After three days Jonathan responds correctly when Mr. Donovan says, "Lunch is done." Mr. Donovan immediately praises Jonathan.

Source: Adapted from **https://blog.difflearn.com/2018/10/25/3-ways-fade-prompts/**

5. Ask students for feedback on which precorrection approaches they prefer

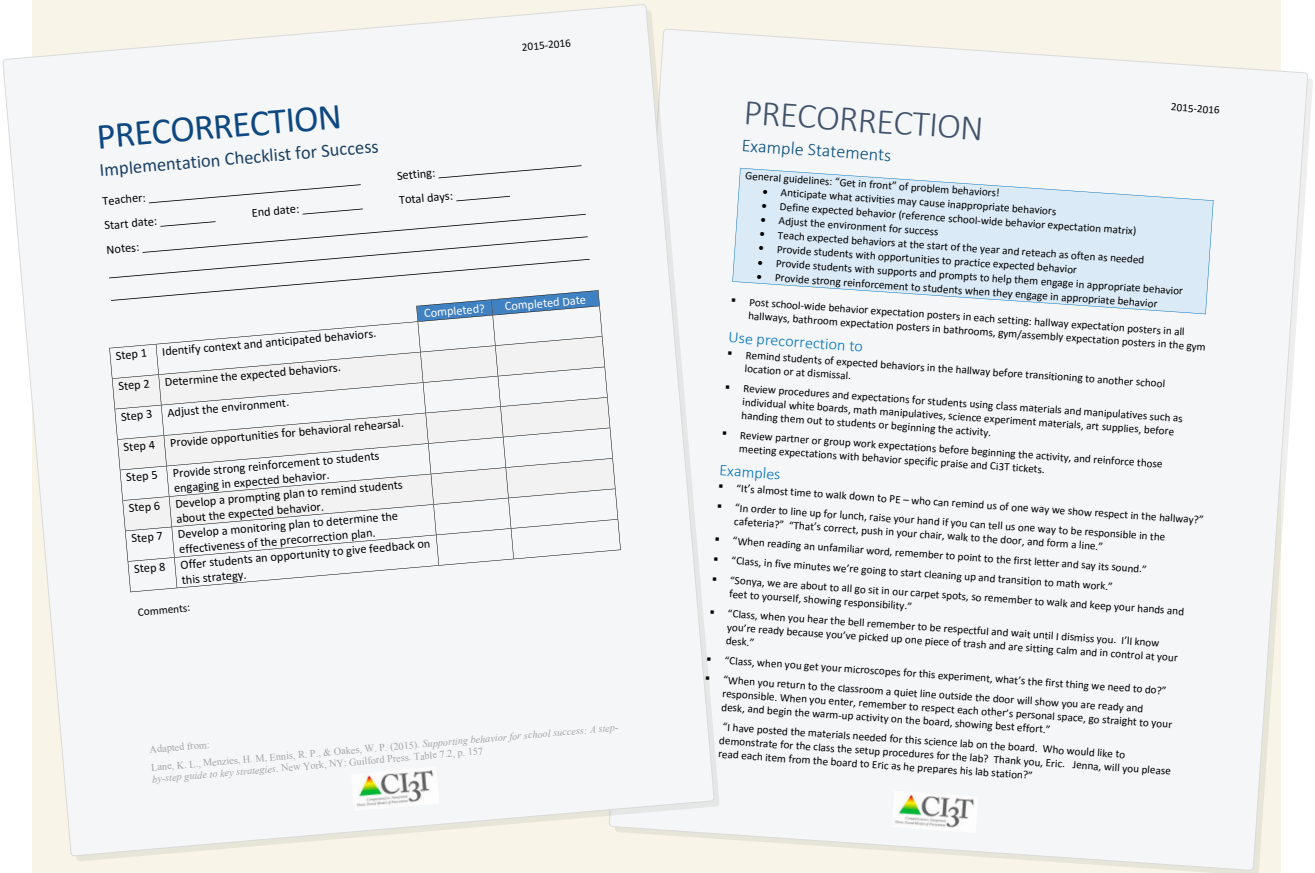
Knowing students well will help teachers develop precorrections that respect cultural differences and backgrounds. Consider talking to students to learn more about what types of precorrections work best for them. For example, say, *"What is most helpful for you when I remind the whole class of what is expected before we walk to the cafeteria? Is it more helpful if I check in with you privately as well to remind you about expected hallway behavior?"* Share and review behavior expectations and approaches to precorrections regularly with students as part of building a classroom culture.

Potential obstacles and the panel's advice

OBSTACLE: *It's difficult to shift from responding to challenging behavior to precorrecting for expected behaviors.*

PANEL'S ADVICE: Teachers often receive more training on how to respond to challenging behaviors than on how to prevent these behaviors from occurring in the first place.[35] Try identifying the transitions or times throughout the day where the most challenging student behaviors occur, and use these times as opportunities to revisit expected behavior and give students a chance to practice and be acknowledged for meeting expectations. Make sure students understand the expected behaviors during these times and transitions, then plan precorrections to remind them about expected behaviors. Consider developing a precorrection plan as a reminder to provide precorrections during the selected activities or transitions during the day. **Example 2.6** provides examples of precorrection plans.

Example 2.6. Precorrection template and plan



2015-2016

PRECORRECTION

Implementation Checklist for Success

Teacher: _____ Setting: _____

Start date: _____ End date: _____ Total days: _____

Notes: _____

		Completed?	Completed Date
Step 1	Identify context and anticipated behaviors.		
Step 2	Determine the expected behaviors.		
Step 3	Adjust the environment.		
Step 4	Provide opportunities for behavioral rehearsal.		
Step 5	Provide strong reinforcement to students engaging in expected behavior.		
Step 6	Develop a prompting plan to remind students about the expected behavior.		
Step 7	Develop a monitoring plan to determine the effectiveness of the precorrection plan.		
Step 8	Offer students an opportunity to give feedback on this strategy.		

Comments:

Adapted from:
Lane, K. L., Menzies, H. M, Ennis, R. P., & Oakes, W. P. (2015). *Supporting behavior for school success: A step-by-step guide to key strategies*. New York, NY: Guilford Press. Table 7.2, p. 157

CI3T

2015-2016

PRECORRECTION

Example Statements

General guidelines: "Get in front" of problem behaviors!
- Anticipate what activities may cause inappropriate behaviors
- Define expected behavior (reference school-wide behavior expectation matrix)
- Adjust the environment for success
- Teach expected behaviors at the start of the year and reteach as often as needed
- Provide students with opportunities to practice expected behavior
- Provide students with supports and prompts to help them engage in appropriate behavior
- Provide strong reinforcement to students when they engage in appropriate behavior

- Post school-wide behavior expectation posters in each setting: hallway expectation posters in all hallways, bathroom expectation posters in bathrooms, gym/assembly expectation posters in the gym

Use precorrection to
- Remind students of expected behaviors in the hallway before transitioning to another school location or at dismissal.
- Review procedures and expectations for students using class materials and manipulatives such as individual white boards, math manipulatives, science experiment materials, art supplies, before handing them out to students or beginning the activity.
- Review partner or group work expectations before beginning the activity, and reinforce those meeting expectations with behavior specific praise and Ci3T tickets.

Examples
- "It's almost time to walk down to PE – who can remind us of one way we show respect in the hallway?"
- "In order to line up for lunch, raise your hand if you can tell us one way to be responsible in the cafeteria?" "That's correct, push in your chair, walk to the door, and form a line."
- "When reading an unfamiliar word, remember to point to the first letter and say its sound."
- "Class, in five minutes we're going to start cleaning up and transition to math work."
- "Sonya, we are about to all go sit in our carpet spots, so remember to walk and keep your hands and feet to yourself, showing responsibility."
- "Class, when you hear the bell remember to be respectful and wait until I dismiss you. I'll know you're ready because you've picked up one piece of trash and are sitting calm and in control at your desk."
- "Class, when you get your microscopes for this experiment, what's the first thing we need to do?"
- "When you return to the classroom a quiet line outside the door will show you are ready and responsible. When you enter, remember to respect each other's personal space, go straight to your desk, and begin the warm-up activity on the board, showing best effort."
- "I have posted the materials needed for this science lab on the board. Who would like to demonstrate for the class the setup procedures for the lab? Thank you, Eric. Jenna, will you please read each item from the board to Eric as he prepares his lab station?"

CI3T

Source: Comprehensive Integrated Three-Tiered Model of Prevention, ci3t.org

OBSTACLE: *I am not sure how much precorrecting to give and how to maintain an effective rate of precorrections.*


Varying Intensity

PANEL'S ADVICE: Each student's needs for precorrections are unique and likely vary across time, transitions, activities, and settings. In general move from least to most intensive precorrections to determine what works for a particular student.[36] Remember to give the student the opportunity to respond correctly by providing enough wait time (3–5 seconds) before providing additional precorrections.


Reflecting with data

The optimally effective rate of precorrections will depend on the needs of specific students and may change over time. If a student engages in expected behaviors at a specific level of precorrection, slowly decrease precorrections by using less intensive precorrections or waiting to use precorrections only after pausing to see if the student can initiate the activity without a precorrection (this pause could range from 1 to 15 minutes). Monitor whether the student continues to engage in expected behaviors.

OBSTACLE: *I am concerned my students are becoming overdependent on precorrections.*

PANEL'S ADVICE: Fading precorrections in frequency and intensity allows teachers to gauge whether students continue to demonstrate expected behaviors without precorrections. Another idea is to counteract precorrection dependency by giving the student an opportunity to engage in the activity without the precorrections, then start with the least intensive precorrection whenever possible (see precorrection hierarchy in **Example 2.2** above). Ideally, students should have the opportunity to engage in the expected behavior without the precorrections, and when they do so, teachers can reinforce the behavior through praise or rewards, if appropriate in that context (see **Recommendation 3** for guidance on praise and rewards).

OBSTACLE: *I am not sure how to use precorrections in virtual education environments.*

PANEL'S ADVICE: Many precorrections can be effectively used in virtual education environments. **Example 2.7** provides a checklist with tips and tricks for how to implement precorrections in virtual education environments.

Example 2.7. Checklist for precorrections in virtual education environments

Step	Description	Tips and Tricks
1	Identify a virtual learning activity and anticipated problem behaviors	• Focus on activities or transitions between activities where students might benefit from being reminded about expected behaviors
2	Determine the expected behaviors	• Identify 3-5 behaviors and use a behavior matrix (**Example 1.3**)
3	Adjust the virtual environment to set students up for success	• Provide a visual precorrection of the expected behaviors as a virtual background and/or use it as a slide in your presentation
4	Provide students opportunities to practice expected behaviors	• Teach and reteach the remote expectations and provide time for students to practice
5	Provide immediate acknowledgment and feedback to students demonstrating expected behaviors	• Provide behavior-specific praise when students engage in expected behaviors
6	Develop a precorrections and monitoring plan to regularly remind students of the expected behaviors	• Remind all students of the expectations before they transition to the activity by stating the expectations and pointing to the expectation listed on your virtual background • Ask students who need the most practice to share examples of the expected behavior
7	Offer students an opportunity to provide feedback on the precorrections	• Focus on what worked well and what could be different

Source: Adapted from Sherod et al., 2023.

Reflection Questions 

How are you currently using precorrections in your classroom? What kinds of precorrections do your students react to best? What kinds of precorrections do you think your students would prefer, and what changed after you asked them?

Recommendation 3: Acknowledge students for demonstrating expected behaviors through positive attention, praise, and rewards

What is it?

Acknowledging students' positive behavior is part of creating a positive learning environment where all students feel connected and included. Teacher positive attention, praise, and rewards are three distinct strategies that can be used to acknowledge students engaging in expected behaviors in the classroom. Positive attention, praise, and rewards can be in reference to students' behavior during both academic and nonacademic activities.

Positive attention refers to nonverbal acknowledgments, such as a pat on the back, a smile or nod, or a thumbs up.

Praise is a positive statement directed toward a student or group of students to acknowledge their engagement in an expected behavior.

Rewards refer to incentives provided to students for engaging in expected behaviors, such as extra free time or fun activities.

Why do it?

By linking positive attention, praise, and rewards with specific behaviors, teachers can reinforce student behaviors they would like to see more of in the future.[37] Behavior-specific praise and rewards promote students' self-reflection on their behavior, improve their understanding of classroom expectations, and encourage them to engage in desired behaviors. Acknowledging students engaging in desired behaviors also shifts teacher-student interactions away from corrections and reprimands, which in turn allows teachers to form positive relationships with students, improves the quality of teacher-student interactions and classroom climate, and allows more instructional time for learning and academic success.[38]

The panel encourages teachers to use praise and rewards to promote expected behaviors that are consistent with schoolwide and classroom expectations (see **Recommendation 1**). Praise and rewards can also be used as a reinforcement for a precorrected behavior (**Recommendation 2**) and opportunities to respond (**Recommendation 5**). This **Recommendation 3** guides teachers on how to engage parents and other caregivers and students in selecting behaviors and rewards to focus on, how to deliver sincere praise throughout the day, how to purposefully focus rewards on individual or groups of students, and how to use technology as a reminder to acknowledge students engaging in expected behaviors. Meaningful engagement with students and their parents and other caregivers on what behaviors to focus on and how to acknowledge engagement in expected behaviors facilitates culturally responsive praise and rewards.

The What Works Clearinghouse and the expert panel characterized this recommendation as supported by strong evidence, based on 16 studies of the effectiveness of practices to praise or reward students for engaging in expected behaviors.[39] Ten studies meet WWC standards without reservations,[40] and six studies meet WWC standards with reservations.[41] See **Appendix C** for a detailed rationale for the Level of Evidence for Recommendation 3.

How do we do it?

Praise and rewards can be integrated into daily instruction with limited preparation and materials. Teachers should acknowledge students engaging in expected behaviors throughout the school day. Praise and rewards can be directed at individual students, groups of students, or an entire class of students in both general education and separate classrooms.[42] As described in this chapter, the type and rate of acknowledgments can vary across students of various ages and ability levels. Although teachers can fade praise statements over time as students engage in the expected behaviors on their own, acknowledging students' positive behavior and work in an ongoing manner is part of fostering a positive learning environment and should never disappear completely.

Implementation Steps

The panel recommends the following implementation steps for using behavior-specific praise and rewards:

1. Engage students and their parents and other caregivers in deciding on culturally relevant praise and rewards for expected behaviors
2. Focus praise on behavior and effort rather than ability
3. Be sincere when delivering praise
4. Focus rewards on the behavior of the entire class, groups of students, or individual students
5. Scan the classroom continuously to look for and acknowledge students meeting expectations

1. Engage students and their parents and other caregivers in deciding on culturally relevant praise and rewards for expected behaviors

Meaningful engagement with students and their parents and other caregivers can ensure the cultural relevance of acknowledgements. Select acknowledgements that reflect the consensus of the school community–school staff, students, and parents and other caregivers–and that consider the cultural diversity of that community.

Teachers can engage parents and other caregivers in selecting relevant acknowledgements as part of back-to-school or other school-home class meetings. Provide a list of optional rewards and give parents and other caregivers an opportunity to add to the list or mark the ones their child would prefer. Consider both tangible rewards (such as stickers or home notes) and intangible rewards (such as activities or experiences). If providing experiences as rewards, invite parents and other caregivers to supervise an experience, run the school store, or sign up to donate items (for example, trail mix, sundaes, dance party glow sticks). Request that the parent organization provide each classroom with a small budget for purchasing rewards, or encourage the parent organization to hold a fundraiser to support rewards.

When developmentally appropriate, the panel suggests increasing student agency and voice in selection and implementation of praise and rewards by surveying students about how they want to be recognized for demonstrating expected behaviors. **Example 3.1** describes two strategies for engaging students in selecting preferred types of praise.


Reasonable practices

Example 3.1. Praise preference assessment

Variation 1: Classwide survey

1. Create a rating form that includes student names and various ways you can (or are willing to) acknowledge students in a class (for example, verbal praise, nonverbal signal, stickers, notes home, award certificates, schoolwide ticket, classroom points system).
2. Ask students to rate each item (for example, circle preferred strategies and cross out nonpreferred).
3. Review individual student responses to tailor feedback for them (for example, emphasize preferred and limit nonpreferred strategies).
4. Review overall responses to increase the use of preferred strategies and revise nonpreferred strategies to make them more effective.

Variation 2: Individual student interview

1. Use a rating form like described in #1 above (the classwide survey) but use it as a one-on-one interview with students, either with selected individuals or all students.
2. Schedule interviews during the first few weeks of school and/or after school breaks.

Source: **https://www.dropbox.com/scl/fi/ddfcjxqpwqnxz7xopbcla/1.-PPAoverview.docx?rlkey=7sjzewt1jeue7bnpggobo5jwl&dl=0**

2. Focus praise on behavior and effort rather than ability

There is a difference between praise for general behavior (general praise) and praise for specific expected behaviors (behavior-specific praise).[43] Behavior-specific praise is an integral part of helping students to learn new skills—including how to be successful in a variety of settings. State the specific behavior motivating the praise. For example, telling a student, *"Great, you remembered to raise your hand"* is better than simply saying, *"Good job."*

Praise should focus on student behavior or effort rather than on ability. Rather than saying, *"You are so smart,"* praise something the student can control, such as, *"Great job contributing to today's discussion! I appreciated hearing your thoughts," "I appreciate the way you helped your friend when they're filling their tray in the cafeteria,"* or *"I appreciate you listening to somebody else's thought patiently when it was so different than your own idea."* **Example 3.2** provides illustrative examples of effective behavior-specific praise statements.

Praise should focus on behavior expectations that reflect students' present skill levels. If a student is learning a new behavior (for example, beginning morning work immediately upon entering the classroom quietly), begin by acknowledging them for completing a partial aspect of the behavior (for example, entering the classroom quietly), then reinforce successive approximations of the behavior (for example, beginning morning work within 2 minutes of entering the classroom quietly)


Varying Intensity

until they have mastered the new behavior.[44] Make sure the praise statements are delivered consistently and immediately following the desired behavior.

Example 3.2. Effective behavior-specific praise statements

Situation	Instead of saying …	Say this …
Student entering classroom	"Thank you for being on time"	"Jasmine, I appreciate how you entered the classroom quietly and went straight to your desk"
Student taking out appropriate materials	"Thank you for getting ready"	"Kai, you did an excellent job getting your textbook out and are ready to learn"
Student following directions	"Well done"	"John, you did a great job cleaning your desk"
Student actively participating in learning activity	"Thank you"	"Thank you, Jodi, for volunteering and working the problem on the board"
Student attempting to answer questions	"Good job"	"Great, Maddie, you remembered to raise your hand"
Student sharing materials	"You are such a good sharer"	"Robert, I saw you sharing your crayons—look at how you are both having fun"
Student staying on task	"Good job staying focused"	"Thank you for keeping your hands to yourself and focusing on your work, Ana"
Student completing an assignment	"What a beautiful drawing" "You are so smart"	"Elijia, can you tell me how you drew the fur on the tiger? Your details made it lifelike" "Emily, you worked hard on that"
Student completing work on time	"Nice work"	"Way to go, Mandy, you were focused and were right on time!"
Student completing work accurately	"Your answer is right"	"Diego, I can tell you took the time to check your answers and get it right"

Source: Adapted from Haydon & Musti-Rao, 2011, **https://reachformontessori.com/what-is-effective-praise/**

3. Be sincere when delivering praise

Ideally, praise and rewards are provided in a positive, respectful, and nurturing environment where students are acknowledged in a positive way by teachers, other school staff, and peers throughout the school day. Greeting students with a *"Good morning, I am so glad you are here today"* and a smile, among other positive interactions with teachers and peers, serves to build trust and positive relationships. Demonstrate genuine interest in and appreciation of each student by using a pleasant voice, initiating eye contact, and using the student's name when delivering praise. Positive interactions among teachers, students, and others (for example, volunteers) contribute to positive, productive classroom environments.

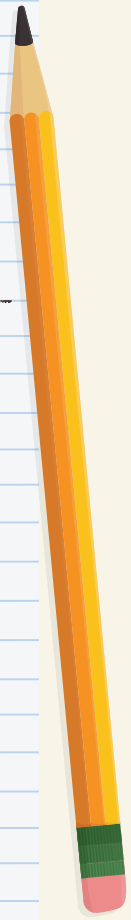
4. Focus rewards on the behavior of the entire class, groups of students, or individual students

Provide rewards based on individual students, groups of students, or the entire class engaging in expected behaviors. Rewards may include activities, items, or sensory experiences students might like to earn or avoid.[45] Tailor the range of rewards to specific students. Some students may enjoy spending time in the cafeteria with peers, and others may prefer to escape the noise by eating lunch in the classroom. Some students may enjoy extra recess time, and others may prefer to play board games in the classroom. Consider making a menu of rewards. **Example 3.3** lists "Wacky Prizes" that can be used as rewards for students.

Example 3.3. Wacky reward ideas

Wacky Prizes are fun games and safe behaviors that are not typically allowed in class. These safe, silly behaviors may be great motivators for your students.

Animal Noises students get to briefly make animal noises	**Freeze Dance** students play a few rounds of freeze dance	**Nerf (ball) Toss** students throw a ball at a basket, trash can, or hoop
The Animal Game the teacher thinks of an animal and gives clues until the students are able to figure out the animal	**Artwork** students have a few minutes to draw or doodle using colored pencils, markers, or crayons	**Paper Airplane Toss** everyone makes a paper airplane and then a contest to see whose goes the farthest
Bazillion Bubbles students blow as many bubbles as they can in one minute	**Hangman** students earn a game or two of hangman using reading words	**Reading** students may look at a favorite book
Jokester the teacher reads silly jokes to the students	**Story** students have a fun book read to them	**Chalkboard/Whiteboard Doodles** students earn a couple of minutes to draw on the board
Computer Time students earn time to play a game on the computer	**Tic-Tac-Toe** students play a tic-tac-toe tournament	**Paper Wad Toss** students can toss wadded paper scraps in the trash can
Dancing students earn a couple of minutes to dance to a fun song	**Other academic games** students can have extra time on a favorite academic activity/game	**Tiptoe Tag** students can play indoor tag while tiptoeing
Extra recess students receive two to five minutes of extra recess	**Simon Says** teacher (or student who's been working very hard) lead the students	**Wiggle time** students have one minute to wiggle in their chairs or act silly using inside voices



Source: Anderson, C.M. & Rodriguez, B.J. (n.d.) The Good Behavior Game: Implementation & Procedures Workbook. **https://www.pbiscaltac.org/resources/CV19%20Supporting%20Teachers%20Students%20Families/The%20Good%20Behavior%20Game.pdf**

5. Scan the classroom continuously to look for and acknowledge students meeting expectations

It is important to acknowledge students for demonstrating expected behaviors throughout the school day. Some experts suggest the use of about six praise statements every 15 minutes.[46] Other experts suggest a ratio of four praise statements for every correction.[47] The worksheet in **Example 3.4** can be useful to set goals and monitor progress for using behavior-specific praise in class. The adequate rate of praise can vary across students. For example, a student who is easily distracted may need praise more frequently—every few minutes—to stay engaged and on task. Technology, such as phones and tablet computers, can provide electronic prompts as reminders to scan the room and acknowledge students meeting expectations.

Example 3.4. Worksheet for goal setting using behavior-specific praise

The Classroom Check-Up | **Goal Setting:** Using Behavior-specific Praise

Now that you have a time of day that you can "catch students being good," put the plan into motion. Set a goal for the number of students you will "catch" using your behavior-specific praise statements.

Goal:
During _____ , I will catch _____ % of students who are demonstrating the expected behavior(s).

Behaviors to "catch"	Behavior-specific praise #1	Behavior-specific praise #2
Behavior 1:		
Behavior 2:		
Behavior 3:		

Simple Data [1]

Did I meet my goal? ○ Yes ○ No	
If YES, what went well?	If NO, what were the challenges?

How will I meet the goal next time?

Clear form 1

Source: **https://app.classroomcheckup.org/api/resources/file/public/Using_Behavior-specific_Praise-Goal_Setting.pdf**

Make sure acknowledgments are applied equitably across all students. **Example 3.5** provides an example of a teacher monitoring their use of behavior-specific praise and using a timer to maintain high rates of praise.

Remember to vary the rate of praise over the course of the day. Use high rates of behavior-specific praise to teach new behaviors, and then shift to less-frequent reinforcement to maintain expected behaviors. Monitor students' classroom behavior while lowering the rate of praise statements. If students begin to engage in challenging behaviors, increase the rate of praise statements to guide them to reengage with expected behaviors. Decrease the frequency of praise when students spend more time engaged in the expected behaviors.

Although praise statements can be faded over time as students engage in the expected behaviors on their own, acknowledging students' positive behavior and work through the use of praise should remain a consistent part of the classroom environment.

Example 3.5. Using behavior-specific praise in a grade 5 reading block

Ms. Arnold teaches grade 5 to 28 students, including a number of students receiving special education supports. During one of the grade 5 team's professional learning community meetings, Ms. Arnold noted three of her grade 5 students, Carlos, Zara, and Anthony, were all struggling both academically and behaviorally. Ms. Arnold knew she needed to motivate all three students to participate in the daily reading lessons, as their engagement was low. Ms. Arnold decided to adopt a strategy to increase her use of behavior-specific praise (BSP) statements during the reading lessons.

Ms. Arnold began by evaluating her current use of BSP during reading lessons. She kept a golf counter in her hand during reading lessons and clicked it each time she made a BSP statement directed at either academic ("Great job identifying the key words in the passage") or social ("Nice job, quietly waiting your turn") behaviors. She noticed that her current rate was quite low (two to three praise statements during the 30-minute lesson). She set a goal to double her highest rate of BSP praise statements (six).

Because all three of her target students displayed low rates of academic engagement, she decided to provide BSP statements that focused on class participation and appropriate responding during the reading lesson, such as: have all assigned materials, participate to the best of your ability, keep your eyes on the teacher, and follow directions the first time. She decided to watch for Carlos, Zara, and Anthony to display any of these behaviors so that she could provide them with BSP. She wrote out ways she could acknowledge these three students for showing their best efforts—for example, "Zara, thank you for following directions and turning to page 3" and "I like the way you have a pencil, paper, and your workbook on your desk."

The next day, Ms. Arnold proceeded with the reading lesson, paying careful attention to Carlos's, Zara's, and Anthony's behavior so that she could "catch" them displaying one of the behaviors she had identified. She used the expectation matrix hanging in her classroom to remind her of which behaviors she should watch for. Since Ms. Arnold had decided to focus BSP delivery on three target students, she tried to vary the ways in which she delivered praise to Carlos, Zara, and Anthony. She would sometimes kneel beside their desks and provide BSP in a soft tone of voice that only the student could hear. Other times she provided BSP statements from the front of the room but used their names and made eye contact so they knew she was acknowledging them.

Given her initial rates of BSP were low, Ms. Arnold decided she needed a reminder to provide BSP statements, so she purchased an interval timer from a sporting goods store and set it to pulse every 2 minutes to remind her to provide BSP. This would allow her to exceed her goal of six BSP statements in 30 minutes.

Source: Adapted from Lane et al., 2015.

Potential obstacles and the panel's advice

OBSTACLE: *I find it hard to maintain high levels of praise over time.*


Training and coaching

PANEL'S ADVICE: It can be difficult to maintain high levels of praise in busy classrooms. Teachers can use technology, such as phones and tablet computers, that provide electronic prompts to remind them to provide praise to students. Discuss ideas with other teachers on how to use high levels of praise and rewards, test out the ideas in the classroom, and ask other teachers to observe and provide feedback on the use of praise and rewards. Also, you might consider using an integrated lesson plan, where you can create reminders for yourself to deliver behavior specific praise at different phases of instruction (for example, during the opening activities, independent practice, and closing activities). There is substantial evidence supporting the use of coaching feedback to effectively change teacher behavior,[48] whether delivered daily,[49] weekly,[50] or biweekly.[51] Additional coaching and support can be beneficial to maintain high levels of praise. The level of coaching and support required will vary from teacher to teacher.[52]

OBSTACLE: *I am concerned that using technology to remind me to praise students will make the praise seem inauthentic.*

PANEL'S ADVICE: Make sure to have eye contact with the student while delivering praise, be specific about the desired behavior, and use varied praise so that the same statements are not repeated. Slowly fade out the use of technology reminders while self-monitoring to confirm that sufficient praise and rewards are maintained. Get feedback from the students on the use of praise. Ask them how they liked this kind of acknowledgment, whether they thought it was helpful, and whether other types of praise would be helpful.

OBSTACLE: *Some of my students feel singled out by individual or public praise.*


Reasonable practices

PANEL'S ADVICE: Consider asking students whether they prefer praise in public or private. Also, learn by watching how students respond when they receive praise. For example, if a student tends to engage in the same behavior more frequently after receiving public praise, it is likely public praise is reinforcing for that student. Other students might be embarrassed by public praise, so for them providing praise in a one-on-one setting or in a note is more appropriate.

OBSTACLE: *I am concerned continuously praising and rewarding my students will decrease their intrinsic motivation for engaging in expected behaviors.*

PANEL'S ADVICE: Acknowledging students for engaging in expected behavior teaches students that they are capable of meeting expectations. Providing behavior-specific praise authentically for behaviors that are within a students' control (for example, effort and not ability) actually builds their self-determined behaviors and motivation as they learn that they are in charge of their own behavior, which in turn can help them enjoy time learning and interacting with peers and adults. As students engage in expected behaviors, they actually begin to enjoy the naturally occurring reinforcers that come along with meeting expectations (for example, the good feeling of completing your work on time, enjoying time with one's peers during a cooperative learning activity), building their intrinsic motivation. As students engage more consistently in expected behaviors, teachers can reduce the rate of reinforcement such as providing acknowledgements less frequently.

Reflection Questions 

How are you currently using praise and rewards? What types of praises and rewards are—or would be—motivating for your students? How can you involve students and their parents and other caregivers in conversations about this?

Recommendation 4: Offer instructional choices to students to increase engagement and agency

What is it?

Students may need support staying engaged in academic and nonacademic classroom activities. Instructional choice provides an individual student or group of students with two or more options for how to engage in classroom activities. Instructional choice is a low-intensity and versatile strategy that provides students with increased agency and promotes student engagement and reduces challenging behaviors.

Within-activity choice: Students are provided options for how to complete a specified activity.

Across-activity choice: Students are provided options of different activities to complete.

Why do it?

Offering students the opportunity to make their own individual instructional choices from among a list of options provided by the teacher allows them to access activities they enjoy (or avoid activities they do not enjoy).[53] Because students are participating in preferred activities and tasks, they engage in the activities more fully and are less likely to engage in challenging behavior.[54] In addition, offering each student a choice of which learning activity to engage in or how to engage in it gives each student ownership over their learning.[55] This promotes self-determined behavior, which has the potential to support positive behavioral development and academic success.

The panel recommends offering instructional choices to students to promote student agency, improve engagement in learning activities, and reduce the incidence of challenging behaviors. The steps in this recommendation outline how to implement instructional choice in the classroom, including guidance on how to create a list of choices teachers feel comfortable offering to students, how to incorporate instructional choice into a lesson, and key considerations when offering students a choice of how to engage in learning activities. The panel emphasizes the importance of teachers offering instructional choices in classroom environments that are responsive to the personal experiences of all students. Teachers should incorporate instructional practices, content, and choices offered that reflect and support all their students engaging in learning activities.

The What Works Clearinghouse and the expert panel characterized this recommendation as supported by moderate evidence, based on three studies of the effectiveness of instructional choice.[56] All three of the studies meet WWC standards without reservations.[57] See **Appendix C** for a detailed rationale for the Level of Evidence for Recommendation 4.

How do we do it?

Instructional choice can be integrated into daily instruction with limited resources and materials. However, teachers will need some additional planning time to build instructional choices into lesson plans. Instructional choice can be directed at individual students, groups of students, or an entire class of students in both general education and separate classrooms.

The type of choices offered can vary across students of various ages and ability levels. Although instructional choice can be used throughout the school year, it should primarily be applied during specific class periods (or segments within a class period) where students may need extra support staying engaged.

Implementation Steps

The panel recommends the following implementation steps for using instructional choice:

1. Determine which type of choices you feel comfortable offering and create a menu of choices
2. Use the menu of choices to determine which type of choices to add to a particular lesson
3. After choice is built into the lesson, offer each student the established choices
4. Ask the student to make their choice, providing ample time for the student to respond
5. Listen to or observe the student's response and provide them with the selected option
6. Offer students an opportunity to give feedback on the choice they selected

1. Determine which type of choices you feel comfortable offering and create a menu of choices

Begin by making a menu of choices, which is a list or table of the various types of choices you would feel comfortable offering to each student. The list of choices can be tailored to specific students, considering their diverse backgrounds and needs, or the list could provide a set of choices that could be offered to any student. The menu of choices can serve as a reference sheet for use when deciding which choices to incorporate into daily lesson plans.[58]

Consider creating lists of both within- and across-activity choices to incorporate into lesson plans. Within-activity choices involve giving each student a choice of materials, location, or partner for a specified activity (for example, *"Would you like to use crayons or markers to color your map today?"*). In contrast, across-activity choices involve giving each student a choice of what activity they would like to do (for example, *"Would you like to work on your presentation or the text for your paper today?"*), in what order they would like to do a set of activities, or what future activity they would like to engage in following a required task.[59] **Example 4.1** illustrates different types of across- and within-activity choices. Consider co-creating the menu of choices with students. Students may suggest choices that are surprising to teachers (for example, extra minutes of uninterrupted social time, time alone with teachers). Co-creating the menu of choices empowers students and promotes ownership of the choices offered.

Example 4.1. Different types of choices

Across-Activity Choices	Within-Activity Choices
Differentiation of product: Written paper, oral presentation, YouTube video, Think-Tac-Toe boards (see template in **Example 4.4**).	**Differentiation of materials:** Crayons or markers? Pencil or pen? Paper and pencil or computer?
Order of completion: Which activity would you like to do first? Select a learning center.	**Differentiation of work completion:** Select three out of five math problems, choose even or odd problems, work independently or with a partner, finish in class or at home.

Source: **https://ci3t.org/tier_library/ic/00_Instructional_Choice_Introduction.pdf**

2. Use the menu of choices to determine which type of choices to add to a particular lesson

When developing lesson plans, refer to the menu of choices and determine which types of choices are most appropriate for a particular topic, as well as where these choices could be incorporated in the lesson and which students will be offered the choice (for example, an individual student or the whole class).[60] Offer all students the same choices or customize choice options for specific students according to their individual needs.

Reasonable practices

When choice is offered to the whole class, each individual student should have the opportunity to pick their personal option. For example, if the task to do first were to be decided by the whole class and all students must abide by the classwide choice, this means some students would not have had their choice. Although this strategy can be fine in some contexts, it is not consistent with principles of instructional choice in which students self-select their preference.[61]

Varying Intensity

While instructional choices are best incorporated frequently throughout the curriculum, begin by implementing instructional choice during a specific class period (or segment within a class period) when students struggle to maintain engagement. Within this class period, consider incorporating instructional choice into the first activity with the goal of starting classroom behavior on the right track. For example, teachers may start a lesson with a writing prompt, to which students respond in their journals. In this case, the teacher could offer each student several writing prompts to choose from rather than requiring them to answer a single prompt.[62]

After successfully incorporating instructional choice into a lesson, consider ways to provide a range of choices in a range of contexts. This variety of choices could in turn enhance student motivation and increase academic engagement.[63] Planning ahead is important in creating a variety of options and will ensure that each student has sufficient opportunities for choice making.

Teachers can change the choice options over the course of the school year, depending on how responsive students are to the choices that are being provided. Allowing students to go through a new preference assessment, or determining with the teacher what choices they would like, keeps the choices exciting and engaging throughout the year.

3. After choice is built into the lesson, offer each student the established choices

When offering instructional choice, ensure that the choices are clearly presented to each student. For example, hold up three writing utensils—a mechanical pencil, a wooden pencil, and an ink pen—and then ask a student: *"Which one of these three would you like to use to complete today's writing assignment?"*[64] Another option is to present students with choices using index cards with pictures of their choices. For a choice of which problems to complete, present a card with a picture of a worksheet with even-numbered items circled and a card with a picture of a worksheet with odd-numbered items circled; for a choice of where to work, present the student with a card with a picture of the class library and a card with a picture of the teacher table.[65]

4. Ask the student to make their choice, providing ample time for the student to respond

After choices have been offered, explained, and clarified, the next step is to ask students to make their decisions. For example, if students are offered a choice of where to conduct an assignment (for example, at their desk or at a small-group table), they should then be prompted to make their choice. For example, teachers can directly pose the following question to an individual student: *"Emily, where would you like to sit while you conduct your assignment?"*

Each student should be given sufficient time to make their choice. Some decisions, such as the type of writing utensil to use, could be made fairly quickly. In this case, 5–10 seconds may be sufficient. More complex choices may require more time. For example, students may need days to decide what type of science fair project they want to create.

The choice-making process can be challenging for some students, particularly if they are not used to making choices or if they are concerned about making the wrong choice.[66] When students are struggling to make the requested choices within the allotted time frame, it may be necessary to prompt them in an encouraging way. For example: *"Brian, it is time to make a choice. Do you want to use paint or clay for your art project? I am sure either option will be great."*

If a student is unable to decide, teachers can probe to better understand whether the student is unable to make a choice because there are too many choices, they do not understand the choices, or all the choices are unappealing. If there are too many choices, then the teacher can narrow down the choices for the student. If the student does not understand the choices, the teacher can explain the choices to the student (for example, *"This is what I mean when I say you can decide where to sit during the assignment"*). If the student does not like any of the choices, the teacher can ask the student for another suggestion.

When implementing instructional choice, it is important for teachers to anticipate potential issues related to the student's choice and how to address them. Here are some of the questions a teacher might consider in preparing and tailoring instructional choice to their instructional setting: Can students change their minds after making a choice? If so, how many times can they change their minds? How will you handle the situation in which a student wants to make a late change that may impede their ability to complete the assignment within the allotted time?[67] **Example 4.2** provides an illustrative example of implementing instructional choice in a reading block.

Example 4.2. Implementing instructional choice in a reading block

During one of the grade 1 team's professional learning community meetings, Mr. Garvey and Mrs. Brayfield noticed there were two grade 1 students who were struggling in their behavioral performance and who were also having trouble with work completion. Despite reading at grade level and having no absences during the first trimester, both Gus and Dan struggled to finish their language arts assignment during their reading block. Mrs. Brayfield indicated that they were often chatting with each other and disrupting other students during independent work time.

Mr. Garvey suggested the possibility of using instructional choice for the students during Mrs. Brayfield's class and seeing how Gus and Dan responded to this low-intensity support. Together the teachers made a menu of within- and across-task choices they felt comfortable offering to students in this class:

- Choice of where to read independently within the classroom (for example, beanbag chair, carpet, desk, rocking chair)
- Choice of whether to begin with writing their sentence about their favorite scene or drawing their illustration of their favorite scene first
- Choice of which book to read during free reading time
- Choice of reading silently or into a tape recorder
- Choice of completing even or odds on a vocabulary development worksheet

When developing weekly lesson plans for the reading block, they referred back to the menu of choices, decided which types of choices were most appropriate for a given lesson, and determined where to build in these choices. When presented to students, the choices were written on the board and explained verbally. In some instances, either Mr. Garvey or Mrs. Brayfield provided other visual demonstrations, such as holding up a box of crayons and a box of sparkly markers to make it clear that either one was an option. During this step, they answered any clarifying questions. Next the teacher leading instruction for that particular activity prompted the students to make their choices. If additional questions were raised, those were also answered in a swift yet respectful manner.

Teachers were careful to ensure students had sufficient time to make their choices. The wait time varied according to the task at hand. For example, if the choice was an option between writing with an ink pen, a mechanical pencil, or a wooden pencil, the window for choice might be 30 seconds. If the choice was picking a storybook to read from the class library, the wait time might be 3 minutes. Or the students might be presented two pictures and asked to pick one within 1 minute about which to write a short story that later would be edited and shared with a friend. In either case, the window of time for making the choice (for example, 30 seconds, 3 minutes, or 1 minute) was explained to all students, and a timer was used if necessary.

After being given sufficient time to make the decision, the teachers listened to or observed each student's response, noting their choice. If a particular student was struggling to make a choice within the allotted time, either Mr. Garvey or Mrs. Brayfield quietly prompted the student to make a choice from the available options. Both teachers were cautious to remain positive yet firm to ensure the students had enough time to successfully complete the selected task. In some cases, they encouraged them to try new experiences when appropriate—always before the selection was made. The teachers praised students' individual choices and allowed them access to whichever choice was made. Both teachers agreed ahead of time that students would each be allowed the full range of choices offered, as it is important to honor people's individual choices. They also decided it was important for students to stick with their initial choice each time choice was offered, but students could make a new choice on another day/activity.

About once a week, either Mr. Garvey or Mrs. Brayfield would offer students the opportunity to give feedback on the choices they selected during the previous week. They asked Gus and Dan to rate four short statements about their experience and asked for input on other choices they would like to be given in future days. In brief, Gus (whose ratings are shown in **Example 4.3** below) and Dan enjoyed having choices and indicated they felt they got more work done in reading when they had choices. After getting student feedback, Mr. Garvey and Mrs. Brayfield put the intervention back in place and continued to monitor student performance. They continued this process until each student had five consecutive weeks of daily academic engagement at a level of 80% or better and work completion at 90% or better.

Source: Adapted from Lane et al., 2015.

5. Listen to or observe the student's response and provide them with the selected option

One source of frustration students sometimes note is that they do not feel heard. As such, an important component of instructional choice is understanding and remembering the choices that students have made. After the students make their choice, the next step is to provide them with their selected option. It is not appropriate to discourage the choice the student selected, as this would not promote student agency or motivation to engage with the task. In this 3-minute video, the teacher illustrates how to observe (and how not to observe) a student's choice between drawing or writing a response as part of a learning activity.

6. Offer students an opportunity to give feedback on the choice they selected


Reasonable practices

It is important to find out what students like or do not like about their instructional choices to continually improve instruction. This information can inform future lesson plans incorporating instructional choice. Although it may not be practical to ask students at the end of each lesson what they thought about the choices offered, it could be helpful to ask for input at the end of some lessons.[68] Example 4.3 provides a template for a student feedback form.

Example 4.3. Student feedback form on instructional choice

Now that you have tried it… What do you think, Gus?	0 No, not really	1 Sometimes	2 Yes, definitely
I liked having choices during reading time.			✓
Having choices made reading time more enjoyable.			✓
I got more of my work done because I had choices.			✓
Other students in my class enjoyed having choices.			✓
Percentage: (total number/total number possible) x 100 =	**100%**		

Source: Lane et al., 2015.

Potential obstacles and the panel's advice

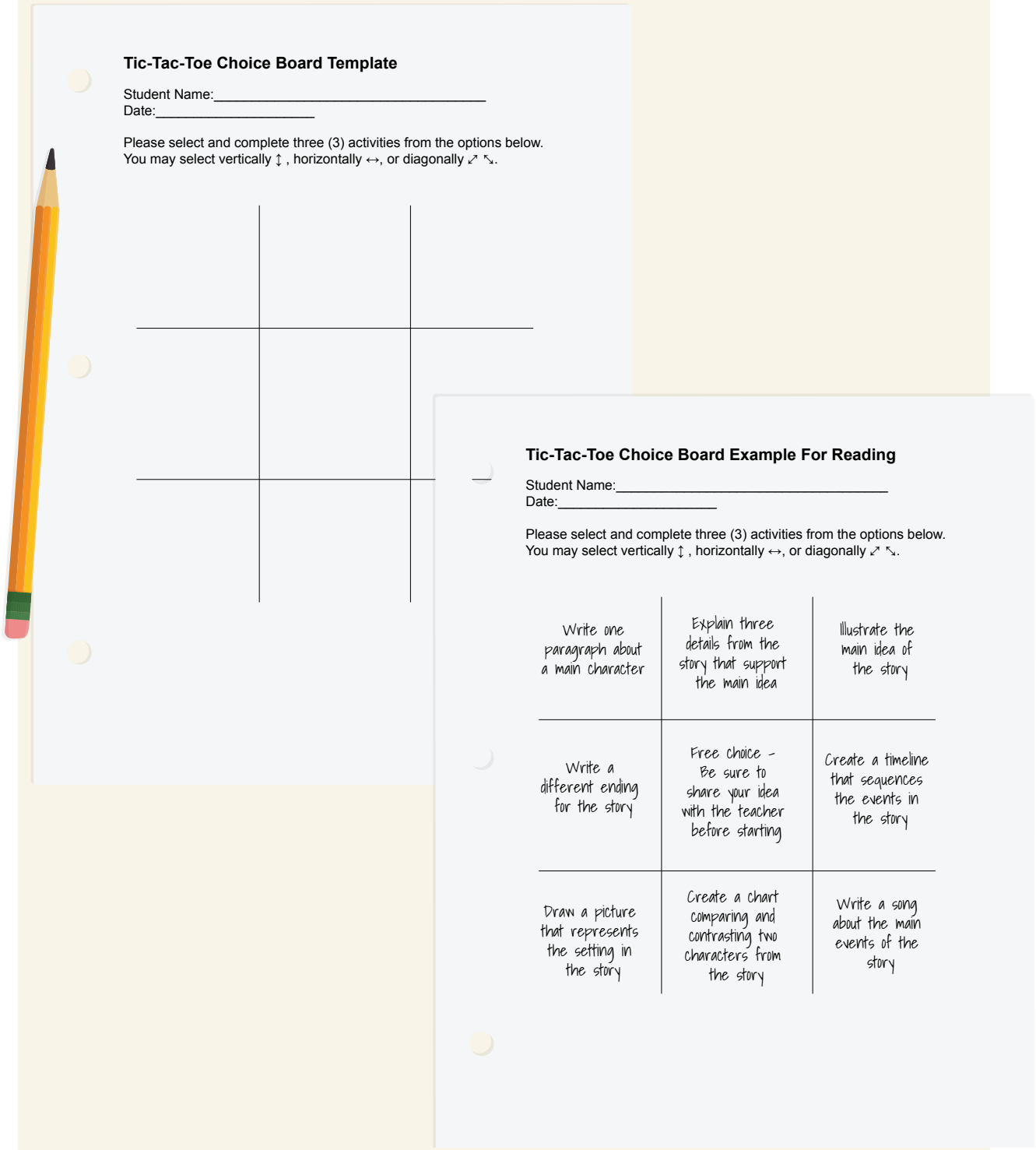
OBSTACLE: *I need help determining which choices to offer and how to offer the choices during instruction.*


Training and coaching

PANEL'S ADVICE: Instructional choice training materials and related resources are available through Comprehensive, Integrated, Three-Tiered Model of Prevention (Ci3T), which provides comprehensive guidance on how to implement instructional choice. The website includes a presentation on how to implement

instructional choice, implementation and treatment integrity checklists, a template for offering choice to students (**Example 4.4**), and a resource guide with more information.

Example 4.4. Template for offering choice to students



Tic-Tac-Toe Choice Board Template

Student Name:_____
Date:_____

Please select and complete three (3) activities from the options below.
You may select vertically ↕ , horizontally ↔, or diagonally ⤢ ⤡.

Tic-Tac-Toe Choice Board Example For Reading

Student Name:_____
Date:_____

Please select and complete three (3) activities from the options below.
You may select vertically ↕ , horizontally ↔, or diagonally ⤢ ⤡.

Write one paragraph about a main character	Explain three details from the story that support the main idea	Illustrate the main idea of the story
Write a different ending for the story	Free choice - Be sure to share your idea with the teacher before starting	Create a timeline that sequences the events in the story
Draw a picture that represents the setting in the story	Create a chart comparing and contrasting two characters from the story	Write a song about the main events of the story

Source: **https://ci3t.org/tier_library/ic/07_Instructional_Choice_Tic-Tac-Toe_Template.pdf**

OBSTACLE: *The instructional choices I am offering are not having the intended effect on student engagement.*

PANEL'S ADVICE: Consider offering a different type of choice that provides the student increased agency. For instance, if within-activity choice is not having the intended effect, consider switching to an across-activity choice. Across-activity choices may have a larger impact because across-activity choices allow students to have control over what activity they engage in, whereas within-activity choices give students control only over how they engage in a teacher-selected activity.[69]

OBSTACLE: *Some of my students are conflicted when they are offered choices not typically offered to all students.*


Reasonable practices

PANEL'S ADVICE: In situations where students are offered different choices, some students might feel conflicted about choices that are not typically offered to students. For example, a student might express concern about choosing to sit in a special seat that is ordinarily off limits because they do not want to break the rules and get in trouble.[70] To prevent students from feeling singled out, implement instructional choice such that all students in a group are provided with the same choice options. Alternatively, create a tailored set of choices for each student that considers the unique background of that student and includes options that the student is comfortable selecting. Help students understand that some children need different choices than others and that this benefits everyone.

OBSTACLE: *Managing more variability in my classroom can be challenging without prior planning.*

PANEL'S ADVICE: Once teachers prepare a menu of options for offering instructional choice in the classroom, it becomes simple to incorporate a range of choices into lesson plans.[71] Many instructional choices, such as choosing which assignment to complete first or completing a writing assignment in pen or pencil, will not require additional planning; however, some types of choices will. For example, if students are given a choice of what medium to use in a project and one student develops a video, another student makes a diorama, and a third student submits a written paper, teachers need to be clear on how each project will be collected and evaluated.[72] Consider the learning objective for the task and develop a grading rubric to share with students so they can make good choices in how they complete the selected task. In this example, expectations can be established and clearly communicated to avoid potential challenges associated with grading the range of products.[73]

Reflection Questions

Reflect on your use of instructional choice in the classroom. How often do you offer instructional choice to students? What is a new way you could offer within-activity instructional choice? What is a new way you could offer across-activity instructional choice? What lessons could benefit from increased instructional choice?

Recommendation 5: Provide students frequent and varying opportunities to respond to and engage in activities

What is it?

Providing all students with observable, active ways to respond and engage with learning activities can encourage student on-task behavior and active engagement in learning.[74] Opportunities to respond (OTR) is an instructional strategy that provides students with opportunities to be engaged in the learning activity by asking for immediate, fast-paced student responses to questions or statements. Students may respond verbally or with gestures, actions, or preprinted response cards. The teacher provides immediate feedback to student responses.

Active engagement is when students are responding to a learning activity by raising their hand, answering questions from a teacher or peer about assigned material, and/or contributing to the activity in other appropriate ways.

Why do it?

Students who are engaged in learning activities are less likely to demonstrate off-task behaviors. Providing OTR encourages students to stay actively engaged in instruction, which in turn promotes academic success and contributes to a positive classroom climate and learning environment.[75] OTR also allows teachers to frequently check for students' understanding of the material covered in the learning activity.[76]

The steps in this recommendation provide guidance on identifying the instructional objective of OTR, preparing questions and potential responses, teaching students how to respond, implementing OTR as part of a learning activity, and providing opportunities for reflecting and learning.

The What Works Clearinghouse and the expert panel characterized this recommendation as supported by moderate evidence, based on two studies of the effectiveness of OTR.[77] One study meets WWC standards without reservations,[78] and one study meets WWC standards with reservations.[79] See **Appendix C** for a detailed rationale for the Level of Evidence for Recommendation 5.

How do we do it?

OTR can be delivered as an instructional strategy in many different academic and nonacademic learning activities. Providing OTR is an easy strategy to engage students that can be done throughout the school day during a variety of activities, including direct instruction or review, as a warm-up activity, or for a quick knowledge check. Most variants of OTR require minimal preparation and materials; OTR using preprinted response cards requires some planning and materials. Increasing opportunities to respond can be done in both general education and separate classrooms and can be tailored to students at different ages and developmental levels. Although OTR can be implemented throughout the school year, it should primarily be applied during specific class periods (or segments within a class period)

where students may need extra support staying engaged. OTR is designed for use with content that has been taught previously, creating an opportunity for student practice to build fluency.

Implementation Steps

The panel recommends the following implementation steps for using opportunities to respond:

1. Identify the instructional goal
2. Prepare a list of questions and potential responses
3. Teach students how to respond
4. Ask a question, wait for a response, view the response, provide feedback, repeat
5. Provide opportunities for reflecting on learning

1. Identify the instructional goal

OTR can be implemented to increase engagement in many different types of academic and nonacademic learning activities. An important first step is to identify the main goal of using OTR. Is the purpose to promote active engagement in a specific learning activity or classroom instruction, to teach students about expected behaviors during classroom instruction, or to check how well students understand the academic content? By identifying the purpose of OTR, teachers are better positioned to develop relevant and effective questions and response options.

2. Prepare a list of questions and potential responses

Informed by the purpose of using OTR, the next step is to prepare a set of questions, decide how students will respond and for how long OTR will be implemented (usually 3- to 10-minute blocks, but can also be used strategically throughout the day), and then prepare materials accordingly. Develop questions that are relevant to the purpose for using OTR and are interesting and engaging for students. Ensure questions are developmentally appropriate and at the appropriate level of rigor. Determine the number of questions needed for the OTR. If the goal is 3–5 questions per minute for a 5-minute block, the teacher will need to prepare 15–25 questions.

Consider whether students should respond to questions individually, as a group (chorally), or in some combination of group and individual responding.[80] **Example 5.1** illustrates different options for students responding to questions.

Example 5.1. Different options for student responses

Student Response Options	Benefits	Limitations
Response cards: Students respond using preprinted cards with images, words, letters, numbers, colors, symbols, or signs (+/-; higher/lower; true/false).	• Preprinted cards can guide the students to correct responses by limiting the set of potential responses	• Developing cards can take time
Individual, small, dry-erase boards: Students respond by drawing images or writing their answers on the dry-erase boards and holding them up for the teacher and peers to see.	• Reusable and versatile • Do not require pre-creation of responses • Improve fine motor skills	• Can be difficult to read due to messy writing • Requires dry-erase boards
Thumbs up / Thumbs down: Students respond by holding thumbs up or thumbs down to indicate whether they agree/ disagree with a statement, whether a statement is true or false, or whether something is higher or lower.	• Can be weaved into instruction as quick knowledge checks • Easy to use for students in lower grades	• Need to have questions with binary answers (agree/disagree, true/ false)
Holding up fingers: Students respond by holding up fingers to indicate numbers and counts.	• Can be weaved into instruction as quick knowledge checks • Easy to use for students	• Need to have questions with numerical answers
Choral response: Students provide short verbal response in unison when prompted with a cue.	• May increase the frequency of student response or refocus attention • Useful in having students repeat a word or phrase, particularly when learning new words or languages	• Must be used in short periods • May be hard to identify students who are not responding and may not be following learning activity
Movement: Students respond by standing up, sitting down, clapping their hands, stomping their feet, or some other type of physical movement.	• Can relieve energy and may be a preferred format for younger children	• Some students may become overstimulated

Source: Adapted from Haydon et al., 2012.

3. Teach students how to respond

Before implementing OTR, ensure that all students have the needed materials, such as response cards or dry-erase boards and markers. Instruct students on whether to respond individually or as a group. Model how students are expected to respond to a question. If using cards or dry-erase boards, allow students to practice putting their cards or dry-erase boards up and down multiple times until all students are comfortable in using them.[81] Consider using classroom technology, such as electronic whiteboards or tablets, when implementing OTR.

4. Ask a question, wait for a response, view the response, provide feedback, repeat

OTR can be delivered throughout the day or during brief (up to 10-minute) blocks throughout an instructional period. Go through the question-wait-feedback cycle multiple times: Ask a question, wait 3–5 seconds for a response, view student responses, provide supportive feedback, and repeat.[82] To keep students engaged, consider incorporating variety and unpredictability into question asking, changing the pace of questions, and switching back and forth between using group and individual OTRs.[83] Make sure all students have an opportunity to respond. This 3-minute **video** illustrates how to go through the question-wait-feedback cycle with students using response cards. **Example 5.2** illustrates a teacher using OTR in small-group instruction.

Example 5.2. Using OTR in small-group instruction

Mr. Barkley, a grade 1 teacher, is teaching his students to spell three-letter consonant-vowel-consonant (CVC) words. He creates Elkonin squares (three blank boxes) on individual student whiteboards using electrical tape and distributes them to each student. Next, Mr. Barkley places a picture of each CVC word on the board (*hat, cat*). He then instructs the students to work in small groups and use the Elkonin boxes to sound out and spell the words.

When the students are finished, Mr. Barkley asks each group of students to hold their whiteboards up in the air. He gives verbal praise for correct responses, as well as feedback encouraging students to make changes if necessary. Mr. Barkley awards points by placing a checkmark on the board for any group with all members responding correctly.

Source: Adapted from **https://www.education.uw.edu/ibestt/wp-content/uploads/2018/02/Opportunities-to-Respond.pdf**

Remember to provide evaluative and encouraging feedback to all students, for both correct and incorrect answers. If a student is unsure how to answer a question, allow them some think time or let the student "phone a friend" to help with the answer.[84] Modify instruction based on the OTR. If less than 80 percent of student responses are correct for new material or less than 90 percent of student responses are correct for review materials, the teacher might need to spend more time on the material during instruction.[85] **Example 5.3** outlines different response strategies to students providing correct and incorrect answers.

Example 5.3. Teacher response to student answers

If the student response to the question is:	The correct teacher response is:
Correct answer, quick and confident	Maintain the momentum of the lesson. Give a quick, "Right," and present the next question
Correct answer, but hesitant	Praise the student for the correct response, and then review the reasons for the correct answer or the steps associated with finding the right answer
Incorrect answer	Give quick, simple, and supportive feedback and allow the student to provide the correct answer. The feedback should make it clear what the correct answer should be—co-construct the correct answer to the question with the student

Source: **https://www.classroomcheckup.org/increasing-opportunities-to-respond/**

5. Provide opportunities for reflecting on learning

Have students complete feedback forms[86] to provide their perspective on what they think about this type of rapid questioning learning activity. If feasible, ask a colleague to observe a lesson, count the number of OTRs, and provide feedback.

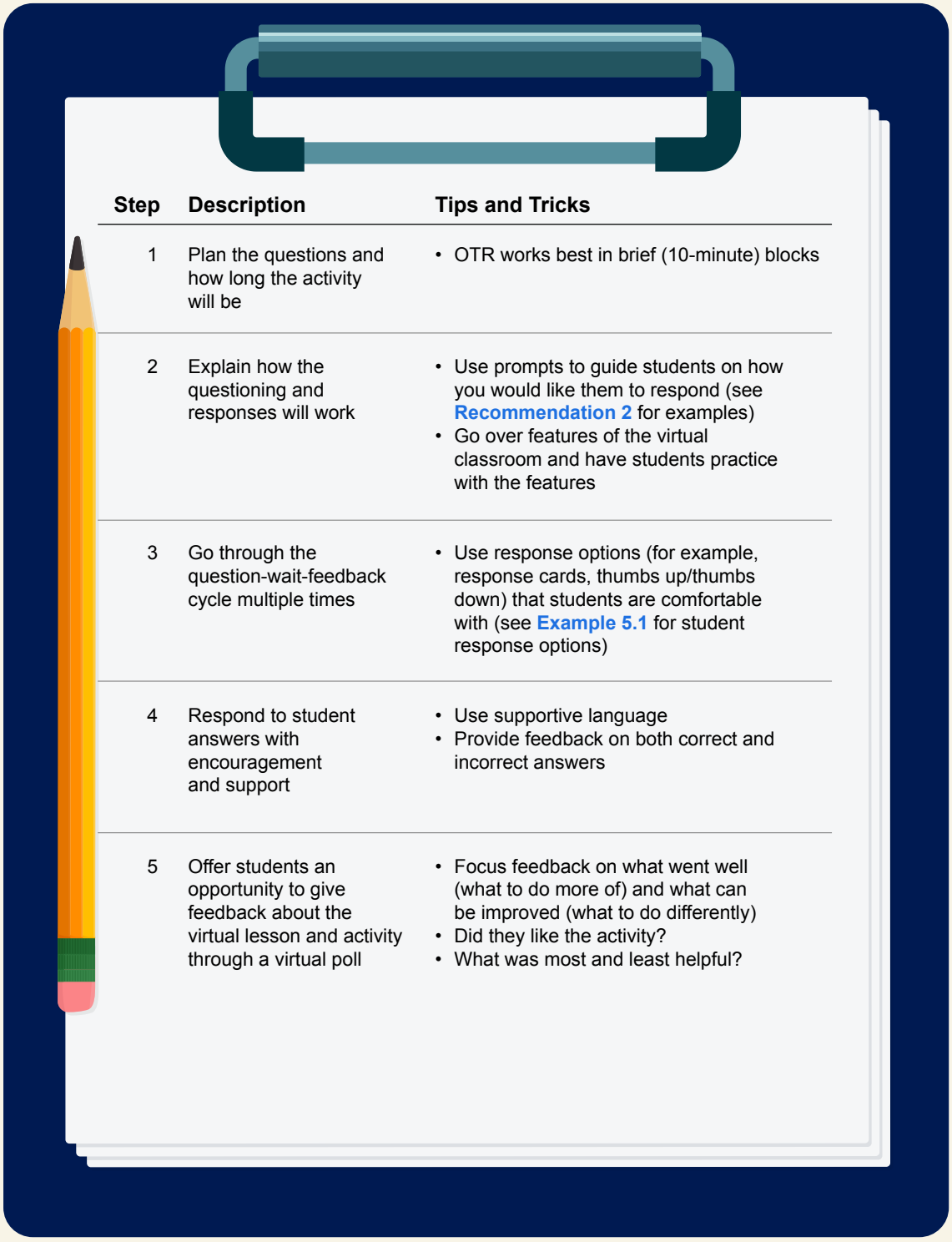
Reasonable practices

Potential obstacles and the panel's advice

OBSTACLE: *I am not sure how to implement OTR in virtual education environments.*

PANEL'S ADVICE: Planning and using virtual tools can lead to effective use of OTR in virtual education environments. After identifying the lesson and lesson objective, the modality of instruction, and the modality in which students will respond (using "reaction" buttons, holding up a dry-erase board to the camera, using the chat function, or verbally responding), the implementation steps are like those described above. **Example 5.4** below provides a checklist for implementing OTR in virtual education environments.

Example 5.4. Checklist for OTR in virtual education environments



Step	Description	Tips and Tricks
1	Plan the questions and how long the activity will be	• OTR works best in brief (10-minute) blocks
2	Explain how the questioning and responses will work	• Use prompts to guide students on how you would like them to respond (see **Recommendation 2** for examples) • Go over features of the virtual classroom and have students practice with the features
3	Go through the question-wait-feedback cycle multiple times	• Use response options (for example, response cards, thumbs up/thumbs down) that students are comfortable with (see **Example 5.1** for student response options)
4	Respond to student answers with encouragement and support	• Use supportive language • Provide feedback on both correct and incorrect answers
5	Offer students an opportunity to give feedback about the virtual lesson and activity through a virtual poll	• Focus feedback on what went well (what to do more of) and what can be improved (what to do differently) • Did they like the activity? • What was most and least helpful?

Source: Adapted from Lane et al., 2015; Haydon et al., 2012; and **https://www.ci3t.org/wp-content/uploads/2020/10/OTR-Virtual-Implementation-Checklist.pdf**

OBSTACLE: *I don't have time to create question banks and response cards.*

PANEL'S ADVICE: While it is true that the initial preparation will take time, the questions and cards can be reused with other students in future learning activities. Consider collaborating with colleagues on developing questions and response cards that can be used for learning activities in multiple classrooms. Remember, the questions and cards you prepare can be re-used in subsequent lessons and even in subsequent years. You might think about this preparation as a long-term investment in supporting future students' positive, productive engagement as well.


Training and coaching

OBSTACLE: *Students do not comprehend the content or how to respond.*

PANEL'S ADVICE: Remember, OTRs are designed for use with content that has been taught previously, creating an opportunity for practice to build fluency. If a student does not seem to understand how to respond, spend 1–2 minutes reteaching the procedures before starting the activity with the whole class. If several students are not following the procedures for responding, reteach the procedures before restarting OTR.


Reasonable practices

OBSTACLE: *I am not sure OTR is appropriate for use with all of my students.*

PANEL'S ADVICE: Plan ahead to determine if culturally and linguistically diverse students and students with disabilities will be able to participate. Consider using different types of responses, such as response cards, dry-erase boards, thumbs up/thumbs down, to accommodate all students in the classroom.


Recognize background

Reflection Questions

How and for what purpose are you currently using OTR in your classroom? For which specific learning activities could students benefit from increased OTR?

Recommendation 6: Teach students to monitor and reflect on their own behavior

What is it?

All students need to meet certain social, behavioral, and academic expectations to succeed in school and in life. Some students may need extra support to meet these expectations.[87] Self-monitoring involves teaching students to observe and record their own behaviors in the classroom, with the goal of promoting self-determined behavior and self-regulation.

Why do it?

The purpose of self-monitoring is to help students identify, reflect on, and demonstrate expected behaviors that allow them to successfully engage in social and academic activities in their classroom.[88] Self-monitoring encourages students to reflect on and adjust their behavior, which in turn promotes self-regulation skills they can use in and out of school.[89]

The steps in this recommendation outline how teachers can implement self-monitoring in their classrooms, including guidance on how to determine whether self-monitoring is appropriate, how to design self-monitoring procedures and tools, and how to teach students to self-monitor their behavior. The panel encourages teachers to implement self-monitoring in combination with prompts and acknowledgments (**Recommendations 2** and **3**). The panel emphasizes the importance of teachers providing a classroom environment that is responsive to all students for the self-monitoring to be successful. Students should feel safe and supported during self-monitoring.

The What Works Clearinghouse and the expert panel characterized this recommendation as supported by moderate evidence, based on three studies of the effectiveness of self-monitoring.[90] One of the studies meets WWC standards without reservations,[91] and two studies meet WWC standards with reservations.[92] See **Appendix C** for a detailed rationale for the Level of Evidence for Recommendation 6.

How do we do it?

Self-monitoring requires minimal teacher time or curricular modifications and can be implemented in both general education and separate classrooms.[93] Some teachers might need training and support (coaching) to appropriately implement self-monitoring in the classroom. Self-monitoring interventions can be implemented at any time during the school year and can be faded out as the students successfully engage with the expected behavior. The duration of self-monitoring can vary from student to student. The panel recommends that teachers implement self-monitoring for at least 6-8 weeks to see how the self-monitoring is working for the student. The time it takes for self-monitoring to become part of the student's regular practice may vary. Self-monitoring may not be appropriate for students in grades K-1, as these students may not have the required skills to replace certain challenging behaviors with expected behaviors.

Implementation Steps

The panel recommends the following implementation steps to teach students self-monitoring:

1. Establish the prerequisite conditions
2. Identify and operationally define the challenging and expected behaviors
3. Design the self-monitoring procedures and monitoring tool
4. Teach the student the self-monitoring procedures
5. Monitor student progress
6. Consider maintenance and follow-up

1. Establish the prerequisite conditions


Reasonable practices

Before implementing self-monitoring in the classroom, consider whether self-monitoring is well-suited to addressing the behaviors a student demonstrates (for the self-monitoring of challenging behaviors, see the suitability checklist in **Example 6.1**). Begin by considering whether a student has learned and is able to perform the expected behavior.[94] Make sure to teach and model the expected behavior, remind and allow the student to engage in the expected behavior, and provide positive acknowledgment when the student demonstrates the expected behavior. If a student knows how to perform expected classroom behaviors but does not do so, then their behavior can potentially be remediated through self-monitoring. Consider whether the behavior reflects aspects of the learning environment that are not responsive to the student. A student might resist a learning environment where they do not feel safe and included.

Example 6.1. Self-monitoring suitability checklist

Self-monitoring is only suitable for addressing a challenging behavior if you answer "YES" to the following three questions:

- Is the challenging behavior able to be clearly defined, readily observable, and reasonable for the student to record?
- Is the student capable of controlling the challenging behavior and performing the expected behavior?
- Does the challenging behavior occur at a sufficiently high frequency to allow it to be monitored?

If the answer to any of these questions is "NO", then other strategies described in this practice guide may be more appropriate for addressing the challenging behavior.

Source: Lane et al., 2011.

Think about whether the challenging behaviors occur frequently enough to interfere with the student's learning and disrupt the classroom environment. Self-monitoring strategies are unlikely to effectively address infrequent behavior problems and are better suited to addressing challenging behaviors that occur frequently enough to consistently disrupt

classroom activities.[95] **Example 6.2** provides a behavior frequency recording sheet which can be used to record the frequency of the challenging behavior. Initial behavior recording sessions can last for an entire class period or for a 10-minute segment of a class period over 5 school days.[96]

The challenging behavior and the expected replacement behavior(s) should be readily observable and easy for the student to record. If it is difficult for the student to tell whether they are engaging in challenging behavior, they may not be well-positioned to monitor that behavior.

Once these prerequisite conditions are established, teachers can feel confident that self-monitoring is an appropriate strategy. If the prerequisite conditions are not met, then self-monitoring may not be suitable and other strategies described in this practice guide may be more appropriate. For instance, self-monitoring may not be appropriate for students in grades K-1, as these students may not have the required skills to replace certain challenging behaviors with expected behaviors.

Example 6.2. Behavior frequency recording sheet

Student Name: _____ Date: _____

Observer: _____ Target Behavior: _____

Record the number of times the student's behavior occurs.

Date	Frequency

Comments: _____

_____

_____

_____

Source: Adapted from Vanderbilt, 2005.

2. Identify and operationally define the challenging and expected behaviors

If self-monitoring is determined to be a suitable strategy for addressing challenging behaviors, then the next step is to explicitly define and communicate both the challenging behavior and the expected replacement behavior. Communicate about the expected and challenging behaviors through discussion, examples, and modeling.

It is important for the student to learn the expected behavior that can replace the challenging behavior so that the challenging behavior is replaced with appropriate behaviors as opposed to different challenging behaviors. If the self-monitoring materials will be sent home to parents and other caregivers, communicate to the parents and other caregivers what self-monitoring is and why the materials are being sent home, as well as the challenging and expected behaviors that are the focus of self-monitoring. Communicating and informing families about expected classroom behaviors supports a mutual understanding and dialogue between parents and teachers about the behavior expectations in the classroom, similarities and differences between expectations at home and at school, as well as effective ways to encourage and help students navigate the expectations of the different environments. Teachers can also encourage parents and other caregivers to talk to their child about the expected behaviors before school drop-off in the morning and after pick-up in the afternoon. For students who are bussed to and from school, teachers can call or email parents and other caregivers to engage them in a conversation on behavior expectations and ways to encourage and help students navigate the expectations of the different environments.

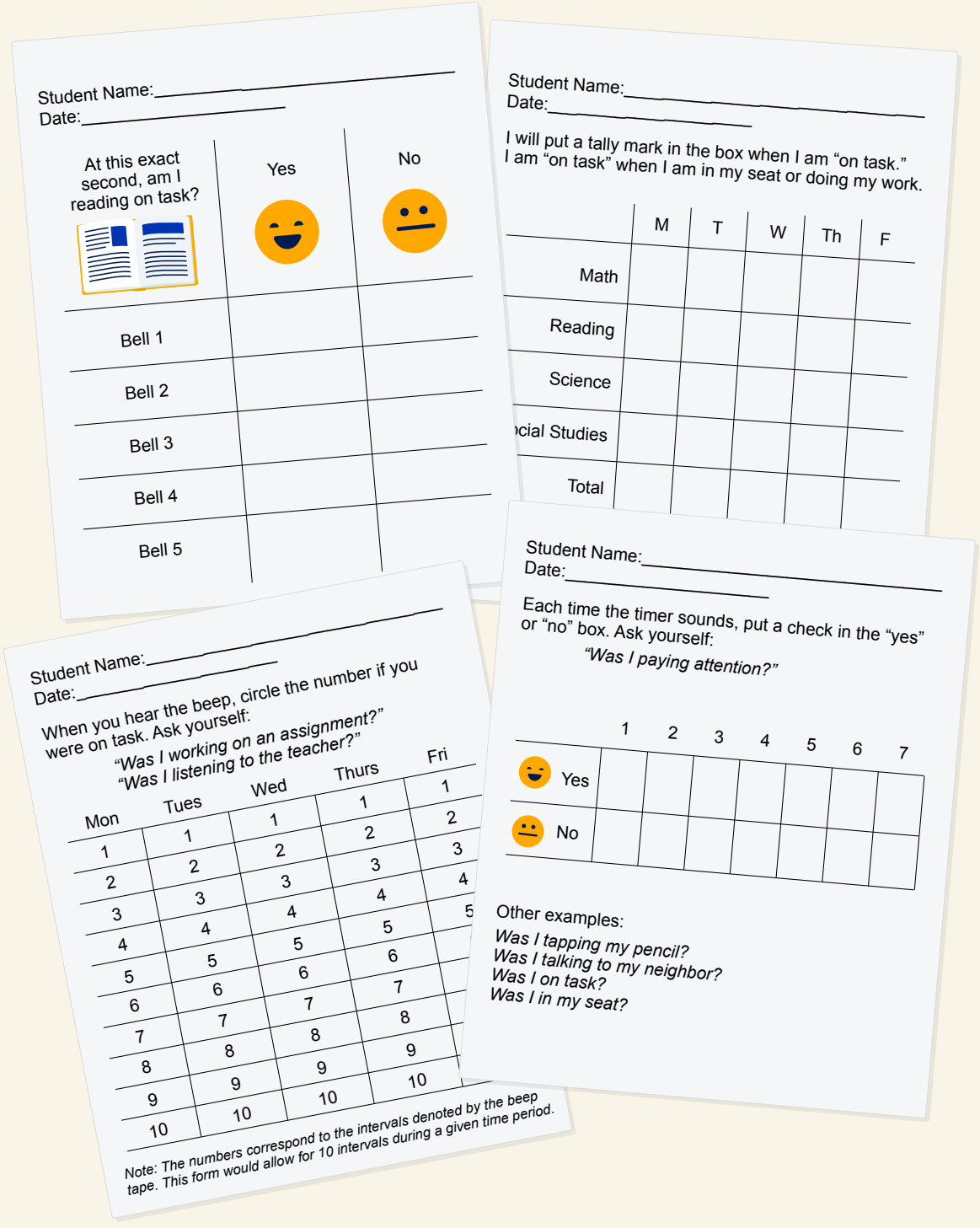
3. Design the self-monitoring procedures and monitoring tool

Determine when and how students will conduct self-monitoring. The self-monitoring period should be of an appropriate length to encompass times when challenging behavior is likely to occur during the daily classroom schedule. To aid the student in their self-monitoring, create an age-appropriate paper or electronic self-monitoring checklist. This checklist can include symbols and simple sentences for younger students and more complex text for older, proficient readers. **Example 6.3** illustrates a self-monitoring recording sheet for students. Expected behaviors should be explicitly stated on the checklist.

Consider using a reinforcer (for example, reward tickets or other schoolwide or classwide reinforcer) and behavior-specific praise in conjunction with self-monitoring. The reward tickets could be exchanged for breaks from nonpreferred activities or access to preferred activities contingent upon engaging in the expected behaviors (for example, participating in group work during a learning activity). See **Recommendation 3** for additional guidance on how to deliver praise and rewards.

Set realistic behavior goals that allow the student to be successful. For example, praise and reward students for being engaged during 80% of the measured time periods. Once the student has reached the 80% goal, set a new goal for the student being engaged during 90% of the measured time periods.

Example 6.3. Sample self-monitoring recording sheets



Student Name:
Date:

At this exact second, am I reading on task?	Yes	No
Bell 1		
Bell 2		
Bell 3		
Bell 4		
Bell 5		

Student Name:
Date:

I will put a tally mark in the box when I am "on task."
I am "on task" when I am in my seat or doing my work.

	M	T	W	Th	F
Math					
Reading					
Science					
cial Studies					
Total					

Student Name:
Date:

When you hear the beep, circle the number if you were on task. Ask yourself:
"Was I working on an assignment?"
"Was I listening to the teacher?"

Mon	Tues	Wed	Thurs	Fri
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	
7	7	7	7	
8	8	8	8	
9	9	9	9	
10	10	10	10	

Note: The numbers correspond to the intervals denoted by the beep tape. This form would allow for 10 intervals during a given time period.

Student Name:
Date:

Each time the timer sounds, put a check in the "yes" or "no" box. Ask yourself:
"Was I paying attention?"

	1	2	3	4	5	6	7
Yes							
No							

Other examples:
Was I tapping my pencil?
Was I talking to my neighbor?
Was I on task?
Was I in my seat?

Source: **https://www.ci3t.org/pl** (Self-Monitoring)

4. Teach the student the self-monitoring procedures


Training and coaching

Use discussion, modeling, coaching, and role play to explain how to use the self-monitoring tool. It may also be helpful to convey that self-monitoring is not a punishment. Instead, it is a tool that the student can use to become more aware of their actions and be more successful in school.[97] When the student is first learning the self-monitoring procedures, it could be helpful to remind them of the challenging behaviors they should try to avoid and the expected behaviors they should be working towards. However, these reminders can fade in frequency as the student becomes familiar with the self-monitoring process (see **Recommendation 2** for guidance on how to remind students to engage in expected behavior). **Example 6.4** outlines a procedural checklist for supporting students' self-monitoring.

Example 6.4. Self-monitoring procedural checklist

In this example, the teacher separately teaches each student the self-monitoring procedures by consistently carrying out the following procedural checklist:

Checklist	Description
Explicitly define and model expected behavior	• The teacher explicitly defines and models examples of staying on-task, such as reading the assignment, looking at a self-monitoring card, tallying the self-monitoring card, asking a teacher for assistance by raising a hand.
Explicitly define and model what is not expected behavior	• The teacher defines and models examples of what on-task behaviors are not, such as doodling on assignment or self-monitoring card, looking anywhere other than the assignment or self-monitoring card, and talking to other students in the class.
Teach student self-monitoring process	• The teacher demonstrates how to use the self-monitoring recording card. • The teacher demonstrates how to self-monitor and record behavior when the student is prompted to self-monitor.
Monitor student use of self-monitoring	• The student verbally describes and physically performs each step of the self-monitoring process to the teacher with 100% accuracy for three consecutive lessons.

Source: Adapted from Rafferty et al., 2011.

5. Monitor student progress


Reflecting with data

Monitor and reward the accuracy of the student's self-recorded behavior by completing the self-monitoring tool during the same intervals and comparing the results to those of the student.[98] If the comparison reveals the student is not accurately recording their behavior, discuss the discrepancy with the student, reteach the recording process, and be more intentional about providing reinforcers for both engagement in self-monitoring and accurate recording. In addition to rewarding students for engaging in expected behaviors (as described above), rewards may be used to encourage accurate and successful completion of the self-monitoring tool, ideally connected to the schoolwide or classwide reinforcement system (see **Recommendation 3** for examples of rewards).

Analyze the student's self-monitoring data over time to determine whether student behavior is improving as intended. Students can even graph their self-monitoring data so they can visualize their progress over time. **Example 6.5** describes how a teacher implemented self-monitoring in a fourth-grade math lesson.

Example 6.5. Self-monitoring in a fourth-grade math lesson

Ms. Alvarado is teaching her fourth-grade class their math lesson. Most of the students are actively engaged in the lesson and are working on their math, but Mary is out of her seat, walking around the room, and talking to peers. Ms. Alvarado does not want to stop the lesson again to redirect Mary back to her seat, but she does not know what else to do. How can Ms. Alvarado help Mary?

Ms. Alvarado reflects on Mary's conduct and determines that Mary's out-of-seat behavior is the most problematic because it is distracting to both her and her peers. In addition, it is preventing Mary from completing her own work. Mrs. Alvarado defines the target behavior as "Mary gets out of her seat, walks around the classroom, and talks to her friends during math." Ms. Alvarado can observe each of these off-task behaviors; she can see when Mary is out of her seat, walking about, and talking; therefore, her definition is observable. The definition is also child-friendly; Mary will understand what Ms. Alvarado does not want her to do.

Ms. Alvarado then decides on a replacement behavior: She wants Mary to stay seated in her desk during work times. Ms. Alvarado recognizes that there may be times when Mary legitimately needs to get out of her seat. In those cases, she wants Mary to raise her hand and ask for permission to leave her seat.

Ms. Alvarado begins her conversation with Mary by saying, "Mary, you are a very hardworking student. I have noticed, though, that sometimes during math you get up and walk around the classroom to talk with people when you should be in your seat. One thing that friends do is help each other get their work done. Do you remember yesterday when you got up and talked to Benjamin while I was teaching? Do you think you were helping him get his work done when you did that? I have a great idea about how we can work together so that everyone will get their work done faster and you will have more free time at the end of the day."

Ms. Alvarado and Mary decide that Mary will record her own behavior every five minutes on a chart at her desk. If Mary is on task during the five minute intervals of the math lesson, she will put a check mark in the "Yes" column; if she is off task, she will put a check mark in the "No" column. In order for this to work, Ms. Alvarado will have to keep track of time and remind Mary every five minutes to self-assess her behavior. Ms. Alvarado sets a repeating timer on her phone with a specific sound so Mary knows to record her behavior but the rest of the class is not interrupted at recording times.

Ms. Alvarado then shows Mary how to record when she is in her seat and when she is out of her seat. "See, Mary, I am in my seat doing my math work, so I put a check mark under the box that says 'Yes'," Ms. Alvarado explains. Ms. Alvarado will continue with examples of how to record the information and have Mary practice with her until she knows that Mary understands how to use the self-monitoring strategy. Ms. Alvarado also demonstrates how Mary should get her attention when she needs to get out of her seat. They practice this additional skill together.

As Mary follows the agreed-upon procedures during math class, Ms. Alvarado tells Mary that she is proud of her effort, gives her a thumbs up, or pats her on her back. As Mary progresses and improve her on task behavior, Ms. Alvarado decreased Mary's recording times to every ten minutes, and then to every 15 minutes. Gradually, Mary totally discontinued the use of the self-monitoring plan. Although Mary no longer required the use of the self-monitoring plan, Ms. Alvarado continued to use intermittent verbal praise as a reinforcer for on-task behavior.

Source: Adapted from Vanderbilt, 2005.

6. Consider maintenance and follow-up

The duration of self-monitoring is dependent on the student's rate of behavior change. Review the self-monitoring data every 6–8 weeks to determine whether self-monitoring should be faded or discontinued. Once a student consistently demonstrates the expected behavior, fade out the formal self-monitoring system by implementing self-monitoring during fewer activities each day or by gradually decreasing the student recording time (see **Example 6.5**). Even after fading the self-monitoring, continue to use reminders (**Recommendation 2**) and positive acknowledgments (**Recommendation 3**) to reinforce the expected behavior. Even if a teacher determines self-monitoring is no longer necessary, the student may elect to continue self-monitoring independently. Teachers can encourage the student to continue self-monitoring on their own as a good life-long practice to support their engagement in and completion of various activities, such as daily exercise or pleasure reading.

Potential obstacles and the panel's advice

OBSTACLE: *Self-monitoring is not reducing the challenging behavior or increasing the expected behavior among my students.*

PANEL'S ADVICE: Make sure the classroom environment is safe and inclusive for all students. Teachers should continuously check the environment they are creating in their classrooms so that they are not only observing students' response to the self-monitoring but also creating or adjusting the environment to be responsive to the students' needs. Remind the student of the challenging behaviors they should avoid and the expected behaviors that they should conduct in their place. After reteaching these components, consider using precorrection (described in **Recommendation 2**) to remind students what is expected before the beginning of the self-monitoring period. Additionally, provide behavior-specific praise or rewards to recognize the student for using the self-monitoring procedures (see **Recommendation 3** for examples of praise and rewards). Make sure teachers and other staff are consistently modeling the expected behaviors.

OBSTACLE: *One of my students is not accurately recording their behavior.*

PANEL'S ADVICE: Occasional errors on the monitoring sheet are not important as long as the student's behavior is generally improving. If the errors are consistent, discuss the discrepancy with the student, reteach the self-monitoring procedures, and acknowledge and praise the student when they accurately record their behavior on the self-monitoring form. Consider using a reward to incentivize more accurate self-monitoring. It is important that the student is active and feels in control of their self-monitoring.

Reflection Questions

Reflect on the power of teaching students to monitor and reflect on their own behavior. How extensively is self-monitoring being used in your school? What are some frequently occurring challenging behaviors that you would like to reduce in your classroom? How could you implement self-monitoring in your classroom?

Recommendation 7: Use behavior ratings to provide feedback to students

What is it?

Providing students structured, formal feedback on their behavior can be an effective strategy to support their self-reflection and engagement in expected behaviors. Behavior ratings are formal routines for having teachers or peers rate how a specific student or groups of students demonstrated–or did not demonstrate–expected behaviors in the classroom. Individual behavior ratings can be communicated back to students and parents and other caregivers. Group behavior ratings can be posted publicly in the classroom.

Behavior ratings are statements describing how a specific student or groups of students demonstrated—or did not demonstrate—expected behaviors.

Why do it?

Behavior ratings provide consistency and feedback on a regular, predictable schedule. Providing students with formal feedback through behavior ratings reinforces behavior expectations and promotes student self-reflection and self-regulation of behavior in the classroom and in other settings.[99] Group-based behavior ratings also promote dialogue and cooperation among students on how to improve classroom behavior, which in turn contributes to a classroom climate and learning environment in which students feel active and successful.[100]

This recommendation presents steps to co-develop behavior ratings with parents and other caregivers and students, segment the school day for ratings and feedback, teach students to meet behavior expectations or implement a group-based behavior game, and review data. Optional steps for group-based strategies are offered, as well. The panel encourages teachers to use behavior ratings to reinforce established classroom behavior expectations (see **Recommendation 1** on establishing behavior expectations) and to acknowledge students through praise and rewards when a goal for engaging in expected behaviors is reached (see **Recommendation 3** for suggestions on how to offer praise and rewards for behavior).

The What Works Clearinghouse and the expert panel characterized this recommendation as supported by strong evidence, based on 12 studies of the effectiveness of using behavior ratings to provide feedback to students.[101] Eight studies meet WWC standards without reservations,[102] and four studies meet WWC standards with reservations.[103] See **Appendix C** for a detailed rationale for the Level of Evidence for Recommendation 7.

How do we do it?

Behavior ratings require materials and some teacher planning. Some teachers may benefit from seeking out consultation or coaching from other teachers when implementing behavior ratings. Behavior ratings can be implemented as part of both individualized and group-based interventions. Teachers can decide whether to use individual or group-based strategies based on how many of their students require additional support with behavior. For both individual

and group-based behavior rating games, students will need an introduction to the game rules and processes. Behavior ratings can be implemented in both general education and separate classrooms at any time during the school year. The duration of behavior rating interventions can range from 3 to 4 weeks, depending on the students' rate of behavior change. Individual students, groups of students, or the entire class can be acknowledged when a goal for engaging in expected behaviors is reached.

Implementation Steps

The panel recommends the following implementation steps for using behavior ratings:

1. Engage students and their parents and other caregivers in co-developing behavior ratings
2. Break the school day into natural segments for feedback and ratings
3. Optional: For interventions focused on groups of students, determine how to divide students into groups
4. Teach and provide students opportunities to practice behavior expectations or implement the game procedures
5. Review data for individual students, groups of students, or the entire class to show progression towards rewards, posting ratings for groups or the entire class as appropriate
6. Optional: Use group-based rewards

Behavior ratings can be facilitated by structured interventions such as Daily Behavior Reports Cards (DBRCs), the Good Behavior Game (GBG), or Tootling (also referred to as positive peer reporting). **Example 7.1** describes strategies for implementing behavior ratings, providing examples from DBRC, GBG, and Tootling.

Example 7.1. Strategies to provide behavior ratings

- **Daily Behavior Report Cards (DBRCs)** list expected behaviors and overall behavioral goals aligned with an individual student's goals that can be documented by a teacher daily. Teachers usually use a standard DBRC for all students in their classroom who would benefit from this type of support (see **Example 7.2**); however, the DBRC can be customized to a specific student's needs. Teachers use the DBRCs to provide feedback to students during class and can send the DBRCs home to parents and other caregivers each day so that the parents and other caregivers can provide rewards for students based on the student's DBRC performance.[a]
- **Good Behavior Game (GBG)** is a classroom management strategy where teachers place students into teams and reward them for demonstrating appropriate behaviors and following classroom rules.[b]
- **Tootling**, a type of positive peer reporting, is a classroom-based intervention that involves having students report on positive things their classmates do.

[a]Source: **https://ies.ed.gov/ncee/wwc/Docs/SingleStudyReviews/wwc_dailyreportcards_061212.pdf**
[b]Source: **https://ies.ed.gov/ncee/wwc/InterventionReport/728**

Source: **https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4711748/**

1. Engage students and their parents and other caregivers in co-developing behavior ratings

Partner with parents and other caregivers and students to co-develop classroom ratings aligned with schoolwide expectations (when available). Focus behavior ratings on specific, measurable behaviors (see **Recommendation 1** for guidance on co-developing behavior expectations). A key element of engaging parents and other caregivers in co-developing behavior ratings is bidirectional communication between them and the teacher about what behavior expectations to focus on and how parents and other caregivers can model or reinforce these behaviors in the home setting. It also involves conversations about the importance of using behavior ratings in nonpunitive ways to promote and reinforce expected behaviors.

Teachers can solicit student input through reinforcer preference surveys that can be sent home with the student or discussed during a parent-student-teacher meeting, which ask students questions such as *"If you had 30 minutes of free time at school, what would you really like to do?"* or *"Please circle each item/choice that you prefer"* from a list of recreation and leisure activities, excursions, social events, hobbies, and food or beverages. When implementing DBRCs, expected behaviors can be listed on a form such as the one shown in **Example 7.2**. This 18-minute **video** provides step-by-step guidance and examples of using DBRCs to facilitate student engagement.

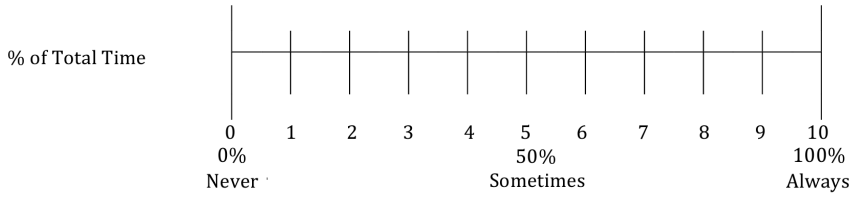
Example 7.2. DBRC template

Direct Behavior Rating (DBR) Form – Fill-in Behaviors

Date: M T W Th F	Student: Rater:	Activity Description:
Observation Time: Start:_____ End: _____ ☐ Check if no observation today	Behavior Descriptions:	

Directions: Place a mark along the line that best reflects the percentage of total time the student exhibited each target behavior. Note that the percentages do not need to total 100% across behaviors because some behaviors may co-vary. If desired, an additional behavior may be defined and rated.

Behavior: _____



Source: https://dbr.education.uconn.edu/wp-content/uploads/sites/916/2015/08/DBR-Standard-Form-With-Fill-In-Behaviors.pdf

2. Break the school day into natural segments for feedback and ratings

Next, determine how to break the class into segments that make sense for doing the ratings and providing feedback about the ratings. Keep the time period brief (5–10 minutes) to begin with and extend it when students are successful. GBG developers recommend playing the game for between 10 and 30 minutes.

3. Optional: For interventions focused on groups of students, determine how to divide students into groups

A group-based intervention can be easier to implement than an individual intervention because teachers are implementing it for more than one student. Consider the student needs in the classroom when deciding whether to implement an individual or group-based behavior rating intervention. For students with more individualized needs or for students for whom the group-based behavior rating intervention was not effective, an individual behavior rating intervention might be appropriate.

Consider issues related to fairness and ability to regulate behavior when determining groups. One approach is to split the classroom down the middle and assign students on the left side of the room to the first group and students on the right side of the room to the second group. Change the grouping at least weekly and consider the dynamics of group pairings prior to making group decisions. For example, avoid placing several students needing additional supports in the same group.

4. Teach and provide students opportunities to practice behavior expectations or implement the game procedures

Similar to teaching classroom expectations as described in **Recommendation 1**, model the ratings and rules of the game and have students practice the game to ensure they understand how to behave according to the rules (see **Example 7.3** for an illustrative case of the Good Behavior Game).[104]

Training and coaching

Example 7.3. Case of Good Behavior Game

Ms. Peyton is a grade 2 teacher. She has been implementing the Good Behavior Game in her classroom for the past 3 weeks. She plays the game three times a day. In the beginning of the instructional period, she rings a bell to announce that the game begins. "I am looking for eyes on me to signal that we are ready to play the game," she tells the class. "What would a good behavior look like if we are working on math?" Ms. Peyton asks the students. She reminds them to look at the posters they co-created with positive classroom behavior. Students begin to raise their hands. "Pay attention," "listen to instructions," "stay in our seats," the students suggest. Ms. Peyton restates the suggested behaviors—affirming the students' examples. The students are ready to play the game.

Ms. Peyton sets a clock for 10 minutes—the duration of the game and math instruction. "Ten minutes on the clock," she announces. The classroom has been divided into four teams. The goal for each team is to get as many smileys for positive behavior during the 10 minutes of math instruction. During the game, Ms. Peyton conducts her regular math instruction, keeping an eye out for positive behaviors in the classroom. She marks a point on the whiteboard every time a team demonstrates a positive behavior. "One point for team 3," she says, without identifying the student.

Ms. Peyton provides small verbal reminders during instruction to encourage the students. "Remember to stay in your seats," "nice work writing the number," "I see a lot of quiet hands in the air, thank you!" The alarm begins to beep. The game comes to an end. "Alright, that signals the end our of game," Ms. Peyton announces to the class. "Let's see how we did." The team with the highest number of points is announced. The winning team selects one minute of silly wiggle time in their chairs from the "wacky rewards" poster in the classroom.

Source: Adapted from **https://www.youtube.com/watch?v=SdBFa-g2Qts**

Provide opportunities for students to ask questions about the ratings and rules and discuss which ratings or rules are challenging or easy to meet and why. This could be done in a whole class discussion, with teachers holding follow-up discussions with specific students as needed. If it becomes clear that students are struggling to follow a certain rule, spend additional time unpacking what this rule means and what it looks like to behave according to that rule. Remember one point earned, never lost. It is important not to take points away as making a mistake later does not "undo" the good thing the students did previously to earn an acknowledgement. Ensure that the ratings, rules, and rewards are culturally appropriate and meet the needs of all students. Use the behavior expectations as instructional tools to create positive, productive, engaging, joyful, and safe environments. **Example 7.4** illustrates how behavior expectations can serve as a flexible instructional tool for all students.

Example 7.4. Behavior expectations can serve as flexible instructional tools

- The behavior expectation "Students usually stay seated in their instructional area" might be understood by students to mean that they should be seated unless they would benefit from being in the "wiggle" corner for a short period of time and then returning to their seat.
- The behavior expectation "Wait your turn to talk" might be followed by students raising their hands and waiting to be called on, but it might be modified if you are playing a game where the first student with the correct answer wins.

Source: Expert panel.

5. Review data for individual students, groups of students, or the entire class to show progression towards rewards, posting ratings for groups or the entire class as appropriate

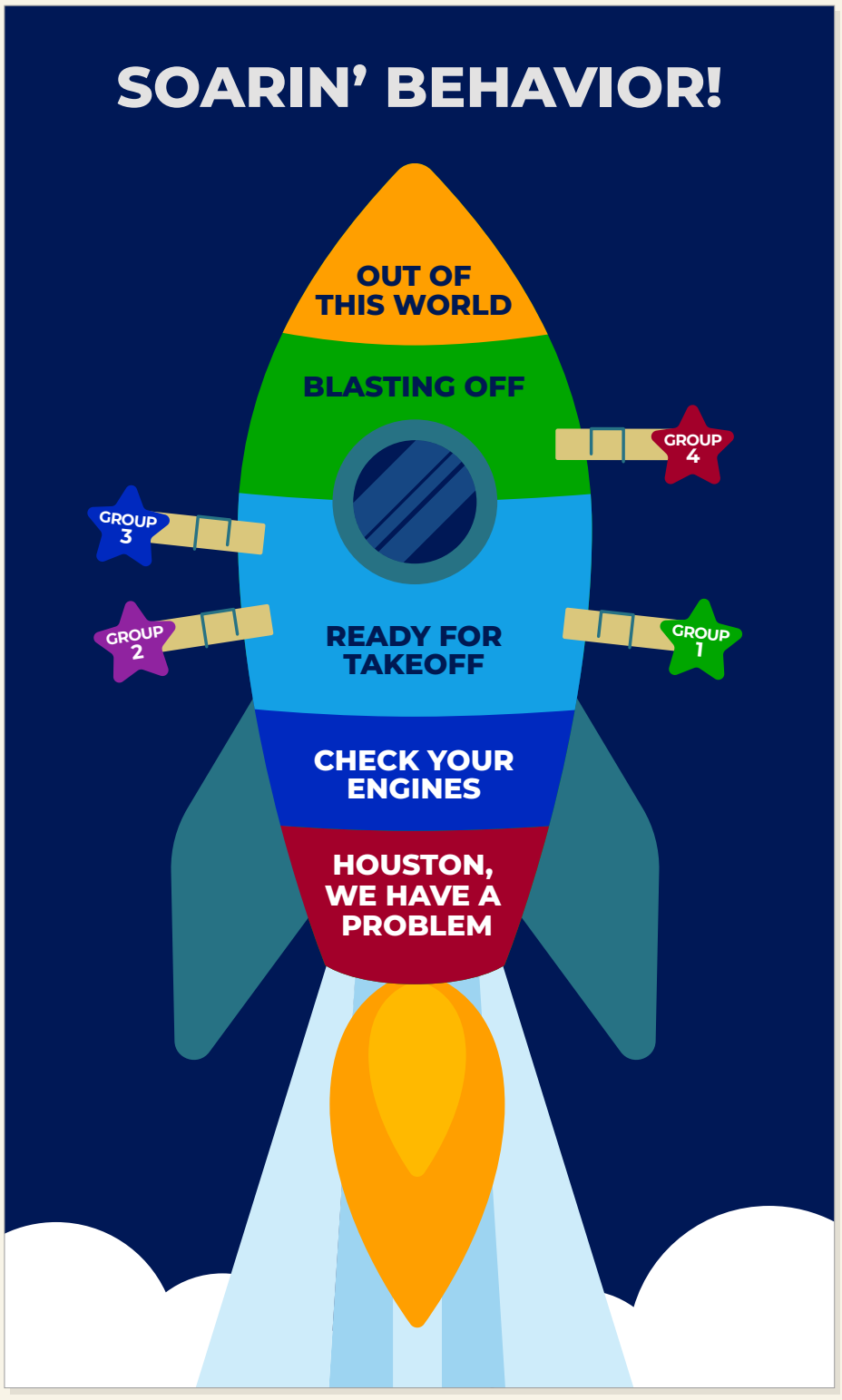
Review the behavior ratings and provide feedback either privately to individual students or publicly to groups of students or the entire class. Look for trends over time, such as if an individual student's daily behavior is considerably different from their norm for more than a week, while expecting that there might be some natural variations. For example, students might have a harder time following behavior expectations and rules in the few days leading up to a holiday break.

Consider if there might be other explanations for differences in group behavior ratings, such as a troubling school safety incident, or for differences in individual student ratings, such as a change occurring at home (for example, a parent being deployed). Teachers might also consider other health barriers to learning that may be affecting student behavior, such as dental pain, vision/hearing concerns, asthma or diabetes, or anxiety. Approach these conversations discreetly and respectfully. When students are going through difficult times, active and reflective listening and reinforcing and validating feelings are important. Be available, nonjudgmental, warm, and supportive. Meet the students on their own terms.

Consider using technology to collect and organize ratings of behavior. Technology can facilitate efficient collection, organization, tabulation, and posting of group and class ratings. Depending on the technology, the feedback can streamline the procedures to track and manage behaviors and provide real-time feedback to teachers, students, and the students' parents and caregivers that is easy to understand (see this 15-minute **video** for an example of creating DBRCs using Google forms).

Public posting involves posting the performance levels of groups of students or the entire class—not individual students—to motivate students to engage in expected behaviors. Sometimes public posting can be a greater incentive for students to demonstrate behavior expectations, but this can be tied to the cultural preferences and experiences of students and needs to be discussed with students beforehand. Focus public posting on the positive developments in students' engagement in expected behaviors. The purpose of public posting is to motivate—not publicly shame—the students to engage in expected behaviors. **Example 7.5** presents an example of how group ratings could be publicly posted. This **website** provides 10 more creative ideas for posting classroom behavior charts.

Example 7.5. Public posting of group behavior ratings



Source: http://prekpractices.blogspot.com/2014/11/classroom-management.html

For individual behavior ratings, regularly communicate ratings to parents and other caregivers, ask them to communicate if daily ratings do not seem to be working as intended, and provide support on how to discuss ratings with their child. Discuss with the student and parent or caregiver their preferred way to receive feedback and what kind of feedback would support the student's success.

6. Optional: Use group-based rewards

Group-based rewards can be effective in promoting expected behaviors. Combine classroom-based group rewards with schoolwide, universal rewards if schoolwide behavior systems are in place, or with other classroom acknowledgements if schoolwide expectations are not in place (see **Recommendation 3** for examples of rewards). Set targets for rewards at a level that allows teams to make some errors and promotes the sense of community and connectedness that team-based activities can inspire. **Example 7.6** describes the steps for implementing peer behavior ratings (tootles) with classwide targets as part of a school day.

Example 7.6. Implementing Tootling in the classroom

- At the start of a school day, the teacher places index cards on the students' desk and encourages the students to write a tootle if they observe a classmate engaging in positive behaviors (for example, helping another student or sharing materials).
- The teacher collects tootles throughout the day prior to transitions—lunch, recess, bathroom breaks, art class—and puts them in a clear container on the teacher's desk.
- Twenty minutes prior to school ending, the teacher reads the tootles aloud and announces the number of tootles made. When the class meets their cumulative goal (having 75 tootles that met criteria), the entire class receives a predetermined award.

Source: Cihak et al., 2009.

Consider culturally responsive rewards both for individuals and for groups of students. For example, students might be happy to earn a point for their team as opposed to earning a point for themselves because they and their culture value group success. Parents and other caregivers of certain backgrounds might also value rewards that promote a sense of community in addition to recognizing individual accomplishments.

Potential obstacles and the panel's advice

OBSTACLE: *I am concerned about publicly singling out individual students when giving feedback and rewards.*

PANEL'S ADVICE: Avoid using systems that include public corrections, by providing corrective feedback in private. Use developmentally appropriate and tailored feedback that describes areas in which students are behaving according to expectations as well as areas for growth.

OBSTACLE: *Technology-enhanced feedback has benefits and limitations.*

PANEL'S ADVICE: Limit technology to the awarding of points, not the removal of points (see **this paper** for an example of a computer-based implementation of the Good Behavior Game). When using technology, create ways to see an individual student's or the class's points (or progress) over time. Look at information that shows behavior fluctuations by time of day, by day of the week, or entire weeks at a time to unpack times when students are struggling to meet behavior expectations.

OBSTACLE: *One of my students enjoys the attention they get when they lose the prize for their group.*

PANEL'S ADVICE: If this occurs, individual students can be in their own groups for a trial period. Identify and implement other ways to reward or praise the individual student who enjoys the attention associated with losing the prize for their group.

Reflection Questions

Reflect on how to implement behavior ratings that reflect culturally responsive behavior expectations and rewards. What could get in the way of creating a behavior rating system that reflects the strengths and needs of all students? How can individual behavior ratings encourage positive communication about a child's behavior and ongoing performance with parents and other caregivers?

Glossary

A

Active engagement is when students are responding to a learning activity by raising their hand, answering questions from a teacher or peer about assigned material, and/or contributing to the activity in other appropriate ways.

Agency refers to students making decisions about and becoming actively engaged in their own learning.

Authentic relationship refers to respectful, honest, and supportive relationships among teachers, students, parents and other caregivers, and school community members.

B

Behavior ratings are statements describing how a specific student or groups of students demonstrated—or did not demonstrate—expected behaviors.

Behavioral interventions are education products, practices, policies, or programs designed primarily to improve student behavior.

C

Caregiver is a parent, guardian, family member, or other adult responsible for a child's well-being.

Challenging behavior refers to the broad range of unwanted inappropriate, off-task, or disruptive behaviors that the teacher is trying to reduce.

Culturally responsive practices refer to methods of teaching that value students' cultural, racial, and linguistic backgrounds and incorporate their cultures into instruction and the learning environment in meaningful ways.

D

Deficit-oriented refers to focusing on students' problems and challenges rather than on students' strengths and potential.

Disruptive behavior is behaviors that are readily seen such as temper tantrums, physical aggression such as attacking other children, excessive argumentativeness, and other forms of defiance or resistance.

Does Not Meet What Works Clearinghouse Standards identifies a study with a low level of causal evidence. This is the rating given to studies with causal research designs that were not implemented rigorously enough to conclude with confidence that the intervention caused the observed changes in outcomes.

E

Expected behavior captures the broad range of wanted appropriate, on-task, or positive behaviors that support learning. Examples include participating in class, paying attention, respecting others, and staying on task.

F

Fidelity of implementation is when a practice or program is implemented as intended by the researchers or developers.

L

Low-intensity interventions are practical, efficient strategies that typically require limited resources (for example, time, effort, costs, professional learning) that teachers can incorporate into instruction and other daily activities to maximize engagement and limit disruption.

M

Meets What Works Clearinghouse Standards With Reservations is the middle possible rating for a study reviewed by the WWC. Studies receiving this rating provide a lower degree of confidence that an observed effect was caused by the intervention.

Meets What Works Clearinghouse Standards Without Reservations is the highest possible rating for a study reviewed by the WWC. Studies receiving this rating provide the highest degree of confidence that an observed effect was caused by the intervention.

O

Outcome domain is a group of closely related outcomes. A domain is the organizing construct for a set of related outcomes through which studies claim effectiveness. In practice guides, the WWC assesses the rigor of evidence on the effectiveness of interventions within each domain identified in the review protocol. The intervention rating and extent of evidence are determined at the domain level.

Overrepresented refers to situations where a disproportionately large number of people with a particular background are included in a group.

P

Precorrection refers to verbal, visual, physical, or other types of guidance that remind students about the expected behaviors in relation to a task or activity. Precorrections can be delivered immediately prior to a new activity or task to prepare a student to engage in expected behaviors.

Prosocial behavior refers to observable actions characterized by interacting with others, including peers and school staff, and behaving in ways to benefit other people.

S

Separate classroom refers to a classroom where a special education teacher is responsible for providing instruction to students with disabilities. Separate classrooms are generally designed to provide students with specialized support. Separate classrooms are sometimes referred to as *special education* or *self-contained classrooms*.

Social-emotional learning is the process of developing friendship skills, self-regulation, and self-awareness. Social-emotional skills refer to the ability to share and cooperate with friends, to identify and regulate emotions, and to deal with problematic social situations.

Self-regulation is the ability to reduce the intensity and frequency of impulsive emotions or behaviors.

Students who need additional supports is a catch-all phrase for the subpopulations of students who are the focus of the low-intensity targeted interventions that are described in this practice guide.

T

Targeted interventions include supports that target individual focal students or a subgroup of students who need more than universal supports.

Teacher is any school-based adult who helps children learn, including classroom teachers, paraeducators, and volunteers.

Teacher-delivered interventions are those delivered by the teacher alone in the classroom without the support of another person.

Tootling is a classroom-based intervention that involves having students report on positive things their classmates do.

Appendix A: Postscript from the Institute of Education Sciences

What is a practice guide?

The What Works Clearinghouse (WWC) within the Institute of Education Sciences (IES) publishes practice guides to share expert recommendations addressing a key education challenge. Each recommendation in the practice guides is explicitly connected to supporting evidence from studies that meet WWC standards.

How are practice guides developed?

To produce a practice guide, the WWC first selects a topic based on the needs of the field. Next, working with a WWC contractor, the WWC selects a panel chair who is a national expert on the topic and panelists to co-author the guide. Panelists are selected based on their expertise in the field and the belief that they can work together to develop relevant, evidence-based recommendations. Panels include at least two current educators who are actively working in the field.

The WWC contractor conducts a systematic literature search and consults with the panel to identify relevant research studies. These studies are then reviewed using the WWC standards to assess each study's internal validity.[105] The WWC contractor works with the panel to synthesize the studies that meet WWC standards into recommendations and to draft the practice guide.

The practice guide is then peer-reviewed. This review is independent of the panel and the federal and contractor staff who supported the development of the guide. A critical task of the peer reviewers is to determine whether the evidence cited in support of each recommendation is up to date and to verify that studies of similar or better quality with contradictory results have not been overlooked. Peer reviewers also evaluate whether the level of evidence characterization for each recommendation is appropriate. The WWC contractor revises the guide to address concerns identified by the external peer reviewers and IES.

In addition to the peer-review of the practice guide, the WWC Tools, Online Assistance, Standards, and Training (TOAST) team conducts an independent review of the evidence to ensure that the findings are valid and accurate. As part of this review process, all studies that meet standards and the meta-analysis for each recommendation are checked and verified.

Levels of evidence for What Works Clearinghouse practice guides

The level of evidence represents the quality and quantity of existing research supporting each recommendation. The WWC and the panel characterize each recommendation using one of the following three levels of evidence: strong evidence, moderate evidence, or minimal evidence.

Appendix A

A ***strong*** level of evidence rating refers to evidence from two or more well-designed, well-implemented experimental studies that the recommended practices improve relevant outcomes for the population of children relevant to the practice guide. In other words, this level of evidence indicates that there is strong causal and generalizable evidence to support the panel's recommendation.

A ***moderate*** level of evidence rating refers either to evidence from well-designed, well-implemented, quasi-experimental design studies; studies where the sample does not represent the population of children relevant to the practice guide; or only one well-designed, well-implemented experimental study. In other words, this level of evidence indicates that the relevant research may not be generalizable or that the WWC has some reservations about the quality of the research for causal inferences because of the study design or implementation.

A ***minimal*** level of evidence rating suggests that the panel cannot point to a body of evidence that demonstrates the practice's positive and statistically significant effects on child outcomes. In some cases this simply means that the recommended practice would be difficult to study using an experimental or quasi-experimental research design; in other cases it means that researchers have not yet studied this practice or that there is a lack of evidence or conflicting evidence about its effectiveness. A minimal evidence rating does not indicate that the panel views the recommendation as any less important than other recommendations with strong or moderate evidence ratings.

To determine these evidence ratings, the WWC contractor first conducts a careful review of the studies supporting each recommendation. For each recommendation, the WWC contractor and the panel examine the entire evidence base, taking into account the following considerations:

- The extent of evidence meeting WWC standards.
- The weighted mean effect size from the fixed-effects meta-analysis for each relevant outcome domain, including its sign and statistical significance.[106]
- How well the studies represent the range of participants, settings, and outcomes relevant to the recommendation.
- Whether findings from the studies can be attributed to the recommended practice.
- The panel's confidence in the effectiveness of the recommended practice.

The WWC contractor and the panel determine the level of evidence rating for a recommendation based on each of the criteria in **Table A.1**. For a recommendation to get a strong rating, the research must be rated strong on each criterion. If at least one criterion receives a rating of moderate and none receives a rating of minimal, then the level of evidence for the recommendation is determined to be moderate. If one or more criteria receive a rating of minimal, then the level of evidence for the recommendation is determined to be minimal.

Appendix A

Table A.1. IES levels of evidence for What Works Clearinghouse practice guides

Criterion	STRONG Evidence Base	MODERATE Evidence Base	MINIMAL Evidence Base
Extent of evidence	For each key outcome domain, the research includes two or more studies that meet WWC standards; AND the studies include more than one setting and a sample of more than 350 individuals.	For each key outcome domain, the research includes only one study that meets WWC standards; OR more than one study meets WWC standards but the studies either include only one setting or a sample of fewer than 350 individuals.	For each key outcome domain, the research does not include at least one study that meets WWC standards.
Effects on relevant outcomes[a]	For at least half of the key outcome domains[b] with findings meeting WWC standards, the following conditions are met: The mean effect from a fixed-effects meta-analysis[c] is statistically significant and positive; AND More than 50.0 percent of the fixed-effects meta-analytic weight comes from studies that Meet WWC Standards Without Reservations. The mean effect from a fixed-effects meta- analysis is not statistically significant and negative for any outcome domain relevant for the recommendation.	For at least half of the key outcome domains with findings meeting WWC standards, the following conditions are met: The mean effect from a fixed-effects meta-analysis is statistically significant and positive; AND More than 50.0 percent of the fixed-effects meta-analytic weight comes from studies that Meet WWC Standards With Reservations. Contradictory evidence from a fixed-effects meta-analysis that is statistically significant and negative is considered with regard to relevance to the scope of the recommendation.	For at least half of the key outcome domains with findings meeting WWC standards, one of the following conditions is met: The mean effect from a fixed-effects meta-analysis is NOT statistically significant and positive; OR No studies meet WWC standards.
Relevance to scope	The research has direct relevance to scope—relevant settings, populations, comparisons, and outcomes evaluated.	Relevance to scope may vary. At least some research is directly relevant to scope.	No research relevant to the scope of the recommendation could be located.
Relationship between the evidence and the recommendation	The recommendation is directly tested in the studies; OR The recommendation is a major component of the interventions evaluated in at least half of the studies.	The recommendation is directly tested; OR The recommendation is a major component of the interventions evaluated in fewer than half of the studies.	The recommendation is not tested in the studies, and the panel provides references to one or more peer-reviewed publications that expound theories that support the recommendation.

Criterion	STRONG Evidence Base	MODERATE Evidence Base	MINIMAL Evidence Base
Panel confidence	Panel has a high degree of confidence that a given practice is effective.	Panel may not be confident about whether the research has effectively controlled for other explanations or whether the practice would be effective in most or all contexts.	In the panel's opinion, the recommendation must be addressed as part of the practice guide; however, the panel cannot point to a body of research that rises to the level of moderate or strong.
Role of expert opinion	Not applicable.	Not applicable.	The recommendation reflects expert opinion based on reasonable extrapolations of research.

[a] Outcome domains relevant to the scope of the practice guide are defined by the protocol.

[b] Key outcome domains are those that are most relevant to each specific recommendation.

[c] If the finding in the relevant outcome domain is from only a single study, then the effect size from that study takes the place of the mean effect from a fixed-effects meta-analysis.

A final note about WWC practice guides

Expert panels try to build a consensus, forging statements that all panel members endorse. Practice guides do more than find common ground; they create a list of actionable recommendations. Where research clearly shows which practices are effective, the panelists use this evidence to guide their recommendations. However, in some cases, the research does not provide a clear indication of what works. In these cases, the panelists' interpretation of the existing, but incomplete, evidence plays an important role in developing the recommendations.

Appendix B: Methods and processes for developing this practice guide

Phase 1: Selecting the panel; establishing a review protocol

Expert panel

The What Works Clearinghouse (WWC) established a nine-member expert panel to advise on the development of this practice guide. The panel consisted of researchers and practitioners with expertise in the areas of behavioral interventions, social-emotional learning, and self-regulation for children in grades K–5. **Appendix E** provides a brief biography of each panel member.

Practice guide review protocol

The WWC contractor worked with the panel to develop the practice guide review protocol, available at **https://ies.ed.gov/ncee/WWC/Document/1302**, which states the practice guide's purpose and scope. The protocol guided the literature search and review effort.

The practice guide focuses on teacher-delivered, low-intensity behavioral interventions in grades K–5. Low-intensity interventions are practical, efficient strategies that typically require limited resources (for example, time, effort, costs, professional learning) that teachers can incorporate into instruction and other daily activities. To be eligible for this practice guide, an intervention had to be:

- An education product, practice, policy, or program designed primarily to improve students' behavioral outcomes.
- Delivered by a teacher in a K–5 general education or separate classroom in the United States or Canada during regular school hours without support from other staff and without significant implementation supports (extensive training or coaching). Parent or other caregiver involvement is allowed if the intervention is teacher directed.
- Focused on individual students or groups of students who need additional supports with behavior. Focal students may:
  - » Display high levels of disruptive behavior, off-task behavior, or limited academic engagement.
  - » Be at risk for internalizing and/or externalizing behavior challenges.
  - » Have or be at risk for disabilities such as autism spectrum disorder, intellectual disability, emotional disturbance (also known as emotional and behavioral disorders, or EBD), or attention deficit hyperactivity disorder (ADHD).

The time frame for the literature search was 15 years, from January 1, 2007, to April 20, 2022. Only studies published in English were included. The eligible sample included children in grades K–5. Eligible study designs included randomized controlled trials, quasi-experimental studies, single-case design studies, and regression discontinuity design studies.

Studies had to include at least one eligible student behavior outcome to be eligible for review. Studies that focused exclusively on academic achievement or parent or other caregiver training were excluded, as they are beyond the scope of this guide.

For the purposes of assessing the relevance to scope level of evidence criterion for this guide, studies with direct relevance to scope examine teacher-delivered, low-intensity behavioral interventions implemented in general or special education classroom settings, include samples of focal students in need of additional supports with behavior in grades K–5, and report an eligible student behavior outcome. Relevance to scope is consistent across Recommendations.

Behavioral interventions can affect a broad range of student and teacher outcomes. Only outcomes that fit into one of the following outcome domains were considered for inclusion in the meta-analyses for this practice guide:

- Student behavior.
- Intrapersonal competencies.
- Student discipline.
- Student attendance.
- Teacher practice.
- School climate.
- School equity.

These outcome domains are described in the **WWC Study Review Protocol (Version 4.1)**.

All studies that met the practice guide review protocol eligibility criteria reported outcomes in the student behavior domain. Only a few eligible studies reported outcomes in the intrapersonal competencies[107] or teacher practice domain,[108] and none of the eligible studies reported outcomes in the student discipline, student attendance, school climate, or school equity domain. Therefore, only the student behavior domain was included in the meta-analysis for all recommendations in this practice guide.

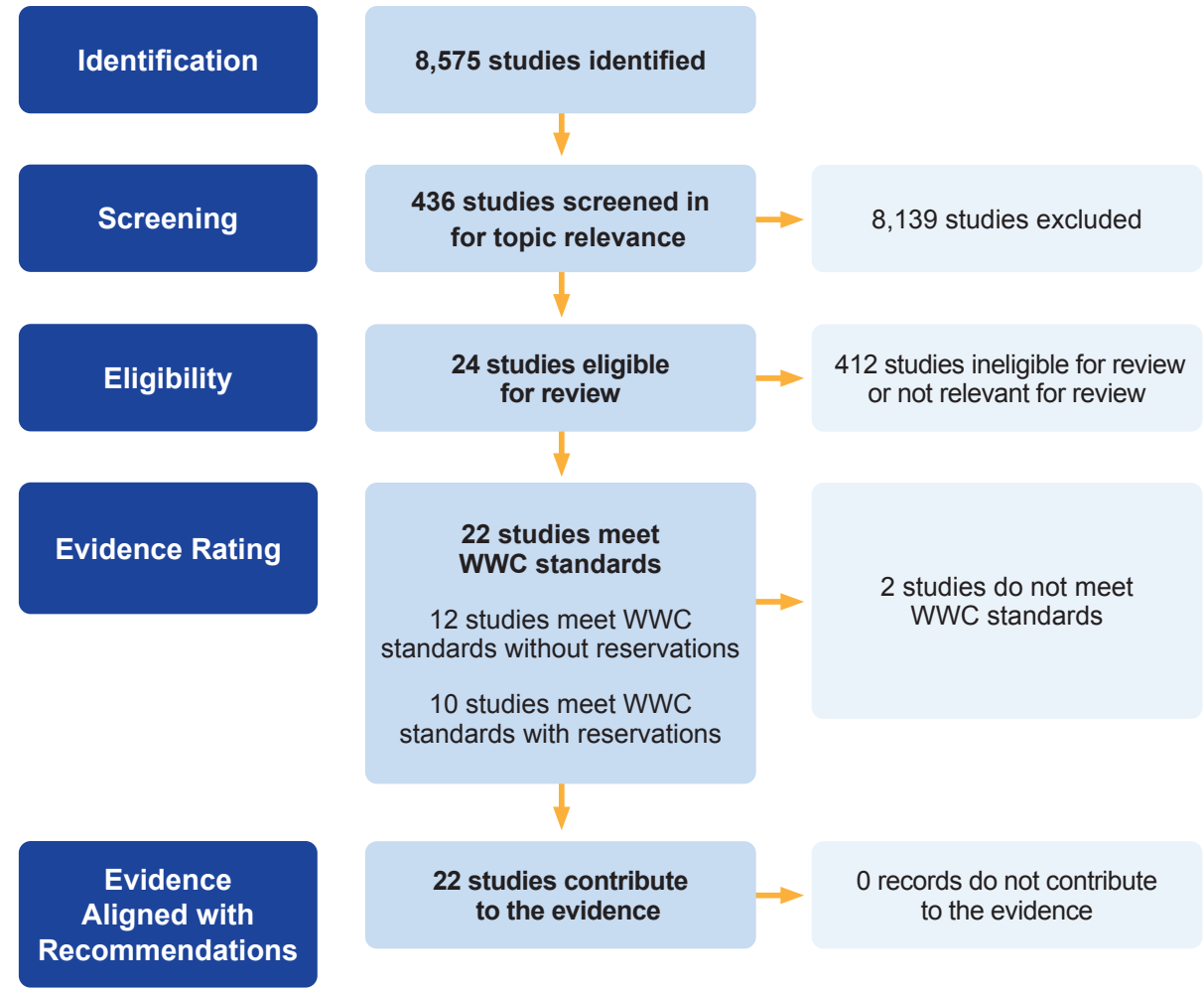
Phase 2: Literature search and review

A targeted yet comprehensive search with the public ERIC search engine (**https://eric.ed.gov/**) was conducted. The **Topic Review Protocol** provides a more detailed description of the search terms and databases used to identify relevant literature. To conserve resources for the systematic review, the search was limited to exclude dissertations and studies conducted outside the United States and Canada. In addition to the electronic search, panel members also recommended studies that could potentially contribute to the guide.

A total of 8,575 records were identified and screened using a multistage screening process to determine whether they met the eligibility criteria described above. This screening process produced 24 relevant studies eligible for review. None of the eligible records included more than one study (that is, more than one experimental comparison). In this practice guide, each

experimental comparison is being referred to as a study and has a unique WWC study review. See **Figure B.1** for the number of records that went through the screening and eligibility processes, and the number of records and studies that were reviewed with the corresponding WWC evidence ratings.

Figure B.1. Studies identified, screened, and reviewed for this practice guide



Phase 3: Generating the recommendations

The WWC contractor conducted a detailed examination of the 22 studies that meet WWC standards to identify practices that played a role in each intervention. Multiple researchers from the WWC contractor team examined each study and developed coding categories to capture key practices in the interventions. These coding categories–referred to as *intervention components*–were developed in an iterative manner and refined as needed to ensure consistency in coding. **Table B.1** defines the nine components of interventions relevant to this practice guide.

Table B.1. Intervention components

Intervention Component	Definition
Clear behavior expectations	Teacher clearly defines and teaches expected behaviors, providing students opportunities to practice and be recognized for meeting these expectations. Ideally, these expected behaviors are schoolwide, with visuals of expectations hung on the walls or whiteboard (for example, schoolwide expectations matrices).
Precorrections for expected behaviors	Brief signal to remind a student of a previously taught expected behavior. These signals can be audible, visual, or tactile.
Teacher ratings of behavior	Teacher assesses student behavior using predetermined criteria (clearly defined behaviors). Ratings are usually recorded.
Self-ratings of behavior	Student assesses their own behavior using predetermined criteria (clearly defined behaviors). Ratings are usually recorded.
Peer ratings of classwide behavior	Peers assess one another's behavior using predetermined criteria (clearly defined behaviors). Ratings are usually recorded and are often statements describing how a specific student demonstrated expected behaviors.
Contingent acknowledgements from teacher	Teachers provide verbal praise for meeting clear behavior expectations or demonstrating appropriate classroom behavior or reward students who meet clear behavior expectations; small rewards typically are agreed upon ahead of time (for example, extra recess time).
Contingent acknowledgements from peers	Students provide verbal or written praise for their peers when the peer demonstrates behavior that meets expectations.
Instructional choice	A strategy in which two or more choices are offered to a student, with the option to individually select one of the choices.
Opportunities to respond	Teachers identify a target content or skill, prepare a set of questions or prompts, and implement rapid questioning, student responding, and teacher feedback. Student responses can be verbal, physical, or electronic.

Topics for recommendations were generated through discussion with the expert panel using themes and intervention components identified during the coding process. The panel identified seven recommendations based on the topics and evidence presented by 22 studies that meet WWC standards. The panel then suggested steps for implementing the recommendations, guided by the evidence base.

Phase 4: Drafting the practice guide

The WWC contractor worked with the panel to further expand and clarify each recommendation and delineate how to implement each recommendation. The team then used an iterative process to draft the recommendations, soliciting feedback from the panel and revising as needed at each stage. The WWC contractor compiled the level of evidence for each recommendation and drafted the technical appendixes. The practice guide underwent several rounds of review, including an IES external peer review (as described in **Appendix A**).

Appendix C: Rationale for evidence ratings

Conducting reviews of eligible studies

What Works Clearinghouse–certified staff reviewed 24 studies to assess the quality of evidence supporting education programs and practices using *WWC Standards and Procedures (Version 4.1)* in conjunction with the *WWC Study Review Protocol (Version 4.1)*. The WWC's summary of each of the 24 studies reviewed for this practice guide is available on the WWC website at **https://ies.ed.gov/ncee/wwc/ReviewedStudies/ForPracticeGuide/31**. Of these 24 studies, 22 studies meet WWC standards and provide evidence for the recommendations in this practice guide. Two studies do not meet WWC standards. The **References** section lists the 22 studies that meet WWC standards and provide supporting evidence for the recommendations.

Determining relevance to recommendations

The WWC contractor mapped the 22 studies forming the evidence base to one or more of the seven recommendations. Eight studies provided evidence for one recommendation.[109] Fourteen studies provided evidence for more than one recommendation, as the interventions in these studies included more than one practice (or intervention component) for improving student behavior outcomes.[110]

In any study, it was not possible to identify whether a singular intervention component or a combination of intervention components within a multicomponent intervention produced the observed effect. The WWC contractor and panel determined which intervention components were likely to cause the effects based on the prominence of the component(s) in the intervention investigated in each study that met WWC standards. Then, each study was assigned to the evidence base for one or more recommendations based on its relevant intervention components. **Table C.1** presents the mapping between each study and the seven recommendations. **Table C.2** presents the intervention components identified for each study.

Table C.1. Mapping between the 22 studies and the 7 recommendations

Study and contrast	Recommendation 1: Clear behavior expectations	2: Precorrections	3: Praise or rewards	4: Instructional choice	5: Opportunities to respond	6: Self-monitoring	7: Behavior ratings
Clarke et al. (2016) ***Response cards vs. business as usual***					•		
Dadakhodjaeva et al. (2019) ***Good Behavior Game vs. business as usual***	•	•	•				•
Dillon et al. (2019) ***Tootling vs. business as usual***	•	•	•				•

Appendix C

Study and contrast	Recommendation						
	1	2	3	4	5	6	7
	Clear behavior expectations	Precorrections	Praise or rewards	Instructional choice	Opportunities to respond	Self-monitoring	Behavior ratings
Ennis et al. (2018) ***Instructional choice vs. business as usual***				•			
Ennis et al. (2020) ***Instructional choice vs. business as usual***				•			
Ennis et al. (2021) ***Instructional choice vs. business as usual***				•			
Fabiano et al. (2017) ***Direct Behavior Rating vs. business as usual***	•	•	•				•
Hoff & Ervin (2013) ***Self-management vs. business as usual***	•	•	•			•	•
Ialongo et al. (2019)[111] ***Good Behavior Game vs. business as usual***	•	•	•				•
Lynne et al. (2017) ***Good Behavior Game vs. business as usual***	•	•	•				•
Markelz et al. (2019) ***Behavior-Specific Praise vs. business as usual***			•				
McHugh et al. (2016) ***Tootling vs. business as usual***	•	•	•				•
Munro & Stephenson (2009) ***Response cards vs. business as usual***					•		
Murphy et al. (2020) ***Good Behavior Game vs. business as usual***	•	•	•				•
O'Handley et al. (2018) ***Behavior-Specific Praise vs. business as usual***			•				
Radley et al. (2016) ***The Quiet Classroom Game vs. business as usual***	•	•	•				
Rafferty et al. (2011) ***Self-monitoring vs. business as usual***	•	•				•	
Rivera et al. (2015) ***Behavior-contingent praise vs. business as usual***			•				
Stremel et al. (2022) ***Positive peer reporting vs. business as usual***	•	•	•				•
Tanol et al. (2010) ***Good Behavior Game vs. business as usual***	•	•	•				•
Vogelgesang et al. (2016) ***Self-monitoring vs. business as usual***	•	•	•			•	•
Williams et al. (2012) ***Direct Behavior Rating vs. business as usual***	•		•				•

Table C.2. Intervention components identified for each study

Study and contrast	Intervention component								
	Clear behavior expectations	Precorrections for expected behaviors	Teacher ratings of behavior	Self-ratings of behavior	Peer-ratings of classwide behavior	Contingent acknowledgements from teacher	Contingent acknowledgements from peers	Instructional choice	Opportunities to respond
Clarke et al. (2016) ***Response cards vs. business as usual***									•
Dadakhodjaeva et al. (2019) ***Good Behavior Game vs. business as usual***	•	•	•			•			
Dillon et al. (2019) ***Tootling vs. business as usual***	•	•	•		•	•			
Ennis et al. (2018) ***Instructional choice vs. business as usual***								•	
Ennis et al. (2020) ***Instructional choice vs. business as usual***								•	
Ennis et al. (2021) ***Instructional choice vs. business as usual***								•	
Fabiano et al. (2017) ***Direct Behavior Rating vs. business as usual***	•	•	•			•			
Hoff & Ervin (2013) ***Self-management vs. business as usual***	•	•	•	•	•	•			
Ialongo et al. (2019)[111] ***Good Behavior Game vs. business as usual***	•	•	•			•			
Lynne et al. (2017) ***Good Behavior Game vs. business as usual***	•	•	•			•			
Markelz et al. (2019) ***Behavior-Specific Praise vs. business as usual***		•				•			
McHugh et al. (2016) ***Tootling vs. business as usual***	•	•			•	•	•		
Munro & Stephenson (2009) ***Response cards vs. business as usual***									•
Murphy et al. (2020) ***Good Behavior Game vs. business as usual***	•	•	•		•	•			
O'Handley et al. (2018) ***Behavior-Specific Praise vs. business as usual***		•				•			
Radley et al. (2016) ***The Quiet Classroom Game vs. business as usual***	•	•				•			
Rafferty et al. (2011) ***Self-monitoring vs. business as usual***	•	•		•					

Study and contrast	Intervention component								
	Clear behavior expectations	Precorrections for expected behaviors	Teacher ratings of behavior	Self-ratings of behavior	Peer-ratings of classwide behavior	Contingent acknowledgements from teacher	Contingent acknowledgements from peers	Instructional choice	Opportunities to respond
Rivera et al. (2015) ***Behavior-contingent praise vs. business as usual***		•				•			
Stremel et al. (2022) ***Positive peer reporting vs. business as usual***	•	•	•			•	•		
Tanol et al. (2010) ***Good Behavior Game vs. business as usual***	•	•	•			•			
Vogelgesang et al. (2016) ***Self-monitoring vs. business as usual***	•	•	•			•			
Williams et al. (2012) ***Direct Behavior Rating vs. business as usual***	•		•						

Determining relevant outcomes

To simplify and focus the synthesis of evidence, the WWC contractor worked with the panel to identify which outcome domains were relevant for each recommendation. The panel and WWC contractor considered only findings in the student behavior domain when determining the level of evidence for each recommendation. Findings from other domains were reviewed but considered to be supplemental findings.

Estimating fixed-effects meta-analytic effect sizes

As discussed in **Appendix B**, the determination of the level of evidence for each recommendation relied on the extent of the evidence from the supporting studies. To synthesize the evidence across studies for each recommendation, an analyst from the WWC contractor team calculated a weighted fixed-effects meta-analytic mean effect size for each relevant outcome domain in which at least two studies had findings, using procedures stated in the *WWC Procedures Handbook, Version 4.1*.[112] In addition, the WWC Tools, Online Assistance, Standards, and Training (TOAST) team conducted an independent review of the meta-analytic data to ensure that the findings are valid and accurate. To calculate the meta-analytic effect size, studies were weighted by the inverse of the variance of each study's effect size. Thus, studies that tested an intervention with large numbers of students received more weight than studies with small numbers of students. The statistical significance of each effect size for each outcome domain was calculated using a z test. For additional information on this process, see Appendix H of the *WWC Procedures Handbook, Version 4.1*.

Appendix C

For consistency, the meta-analysis for each domain is based on effect sizes from outcomes measured closest to the end of the intervention. All other outcomes (follow-up measures, subscales of main findings, and measures for eligible subgroups of students) were not included in the meta-analysis and instead are presented as supplemental evidence at the corresponding study pages on the WWC website. The meta-analytic mean effect sizes for each outcome domain and recommendation are listed in tables **C.3**, **C.5**, **C.7**, **C.9**, **C.11**, **C.13**, and **C.15**. The effect sizes for each outcome domain for the individual studies supporting each recommendation are listed in tables **C.4**, **C.6**, **C.8**, **C.10**, **C.12**, **C.14**, and **C.16**.

Recommendation 1: Co-establish, model, and teach clear expectations for student behavior consistent with schoolwide expectations

Rationale for a strong level of evidence

The WWC and the expert panel characterized **Recommendation 1** as supported by ***strong evidence*** based on 14 studies.[113]

One study meets WWC group design standards without reservations because it is a randomized controlled trial with low attrition.[114] One study meets WWC group design standards with reservations because it is a cluster randomized controlled trial with high individual-level nonresponse, but it provides evidence of effects on individuals by satisfying the baseline equivalence requirement for the individuals in the analytic intervention and comparison groups.[115] Seven studies meet WWC single-case design standards without reservations because they had a sufficient number of phases and data points in each phase to receive the highest rating.[116] Five studies meet WWC single-case design standards with reservations because they did not have enough data points in each phase to receive the highest rating.[117]

There were findings in one relevant outcome domain for this recommendation (**Table C.3**). This domain had a statistically significant, positive meta-analytic effect size: measures of student behavior ($g = 0.93$, $p < .01$).

Table C.3. Domain-level effect size across the 14 studies supporting Recommendation 1

Domain	Number of studies (*k*)	Total sample size (*N*)	Effect size (*g*)[a]	95% confidence interval	*p*-Value	Percentage of weight from studies that meet WWC standards without reservations
Student behavior	14	1,419	**0.93**	[0.81–1.06]	< .01	54.00

k is the number of studies with at least one outcome in the relevant domain that contributed to the meta-analytic effect size.

Note: The effect size was calculated using a fixed-effects meta-analytic effect size across studies.

[a] Statistically significant findings are bolded.

In the studies supporting this recommendation, the interventions were closely aligned with the practices outlined in the recommendation. The panel characterized this recommendation as supported by strong evidence. This rating was supported by the strength of the evidence according to the following criteria:

- **Extent of evidence.** The study samples included 1,419 students and at least 37 schools across multiple states.
- **Effects on relevant outcomes.** The outcome domain (measures of student behavior) had an effect size that was positive and statistically significant, with 54 percent of the meta-analytic weight from studies that meet WWC standards without reservations. This domain represented the only relevant outcome domain for this recommendation.

- **Relevance to scope.** The evidence examined teacher-delivered, low-intensity behavioral interventions implemented in classroom settings, included samples of focal students in grades K-5, and measured a student behavior outcome.
- **Relationship between the evidence and the recommendation.** In all 14 studies, clear behavior expectations were a major component of the intervention evaluated. Interventions involved teachers clearly defining, modeling, and teaching expected behaviors.

Table C.4. Studies providing evidence for Recommendation 1

Recommendation 1: Co-establish, model, and teach clear expectations for student behavior consistent with schoolwide expectations			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Dadakhodjaeva et al. (2019) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: The three focal students were in kindergarten and demonstrated high levels of disruptive behavior. • Two students were male, and one student was female. • All three students were Black. Setting: Three kindergarten classrooms in an urban public school in the Southeastern United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. In this study, the Good Behavior Game was typically played once each day for 10 minutes. The intervention was implemented over the course of 8–11 intervention sessions.	Student Behavior: **1.38**

Recommendation 1: Co-establish, model, and teach clear expectations for student behavior consistent with schoolwide expectations			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Dillon et al. (2019) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Tootling vs. business as usual Participants: Three grade 5 classrooms with a total of 74 students participated in the study. • 53% of the students were female and 47% were male. • 64% of the students were White and 35% were Black. • 12% of the students had an individualized education plan. Setting: Three general education classrooms in two rural schools in the Southeastern United States.	Tootling is a procedure in which children report their peers' appropriate behaviors, using note cards, which are collected, read aloud to the class, and counted by the teacher. The count of tootles is then publicly posted, with rewards being provided to the entire class once a predetermined number of tootles have been submitted. The intervention was implemented at least three times per week during 20-minute class sessions. The intervention was implemented over the course of 11–13 intervention sessions.	Student Behavior: **1.21**
Fabiano et al. (2017) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Direct Behavior Rating vs. business as usual Participants: The three focal students in the study attended grades 4 and 5. • All three students were male. • Two students were White • One student was Hispanic. • One student had a 504 plan. Setting: General education classrooms in one public school and two parochial (Catholic) schools in the Northeastern United States.	Direct Behavior Rating (DBR) is a rating-scale and point-based feedback form that reflects the student's performance on specific behavioral goals. The intervention was implemented during math and English classes over the course of 12–16 intervention sessions.	Student Behavior: **0.68**

Recommendation 1: Co-establish, model, and teach clear expectations for student behavior consistent with schoolwide expectations			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Hoff & Ervin (2013) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Self-management vs. business as usual Participants: The three focal students attended grade 2 and had been referred to the school's prereferral intervention team for disruptive behavior. • All three students were male. • Two of the students were diagnosed with ADHD. Setting: Three general education classrooms in a public school in the Midwestern United States.	The self-management intervention involves students rating their own behavior and the class behavior in relation to a set of predefined rules. Points received for positive ratings are exchanged for a class reward and displayed on a graph. The intervention was implemented during 45-minute math and reading class periods over the course of 9–16 intervention sessions.	Student Behavior: **1.17**

Recommendation 1: Co-establish, model, and teach clear expectations for student behavior consistent with schoolwide expectations			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Ialongo et al. (2019) *Meets WWC standards with reservations*	Design: Randomized controlled trial Contrast: Good Behavior Game vs. business as usual Participants: The high-risk study subsample consisted of 1,114 students in kindergarten through grade 5. High-risk students scored in the top 33rd percentile on the aggressive-disruptive behavior scale of the Teacher Observation of Classroom Adaptation-Revised (TOCA-R) at baseline. • 61% of the high-risk students were male. • 94% of the high-risk students were Black, 3% were White, and less than 1% were Asian. • 3% percent of the high-risk students were Hispanic or Latino. • 93% of the high-risk students were eligible for free or reduced-price lunch. • 13% of the high-risk students received special education services. Setting: 18 elementary schools in one large urban school district in the Mid-Atlantic region of the United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. On average, the intervention was implemented 150 times over the course of a school year.	Student Behavior: -0.06

Appendix C

Recommendation 1: Co-establish, model, and teach clear expectations for student behavior consistent with schoolwide expectations			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Lynne et al. (2017) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: 65 students referred by school administrators for their high levels of inappropriate behavior. • 51% of the students were male. • 95% of the students were White, 3% were Black. • 2% were Hispanic or Latino. • 20% were receiving special education services. Setting: One grade 1 and two grade 4 general education classrooms at a rural school in the Southeastern United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. In this study, the Good Behavior Game was typically played once each session for 20 minutes. The intervention was implemented over the course of 10–12 intervention sessions and took place during normal class activities.	Student Behavior: **0.73**
McHugh et al. (2016) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Tootling vs. business as usual Participants: The three focal students in the study attended grades 2 and 3. • Two students were male, and one student was female. • All three students were Black. • None of the students received special education services. Setting: General education classrooms at two public elementary schools in the Southeastern United States.	Tootling is a procedure in which children report their peers' appropriate behaviors, using note cards, which are collected, read aloud to the class, and counted by the teacher. The count of tootles is then publicly posted, with rewards being provided to the entire class once a predetermined number of tootles have been submitted. The intervention was implemented during one class period each day, which usually lasted 20–30 minutes for two of the classrooms and 60 minutes for one of the classrooms. The intervention was implemented over the course of 10–12 intervention sessions.	Student Behavior: 1.35

Appendix C

Recommendation 1: Co-establish, model, and teach clear expectations for student behavior consistent with schoolwide expectations			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Murphy et al. (2020) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: The study involves three K–6 classrooms with a total of 22 students. • 68% of the students were male. • 68% of the students were Black, and 9% were White. • All students received special education services. Setting: Separate classrooms in an urban, nonpublic alternative education agency in the Midwestern United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. In this study, the Good Behavior Game was implemented daily over the course of 18 intervention sessions. Each Good Behavior Game session lasted 45 minutes.	Student Behavior: **0.63**
Radley et al. (2016) *Meets WWC standards with reservations*	Design: Single-case design Contrast: The Quiet Classroom Game vs. business as usual Participants: The study involved three grade 3 classrooms with a total of 56 students. • 54% of the students were male, and 46% of the students were female. • 96% of the students were Black • 4% of the students were Hispanic. Setting: Three general education classrooms in two public elementary schools in the Southeastern United States.	The Quiet Classroom Game involves establishing classwide noise expectations and goals, monitoring noise levels, and providing rewards for meeting noise goals. In this study, the intervention was implemented during 15-minute class periods over the course of 11–12 intervention sessions.	Student Behavior: **1.13**

Recommendation 1: Co-establish, model, and teach clear expectations for student behavior consistent with schoolwide expectations			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Rafferty et al. (2011) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Self-monitoring vs. business as usual Participants: The three focal students in the study attended grade 5 and were between the ages of 10 and 11 years. • Two students were male, and one student was female. • All three students were White. • All three students had a diagnosis of ADHD. Two students also had other health impairments (unspecified), and one student also had a learning disability. Setting: A general education classroom at a rural elementary school in the Northeastern United States.	Self-monitoring is a strategy in which students are taught to be aware of a specific behavior, evaluate in their minds the extent to which they engage in the behavior during a specific time period, and then record whether they engaged in the behavior. The intervention was implemented over the course of 18 intervention sessions. Each session took place at the end of the day when students received 90 minutes of enrichment instruction.	Student Behavior: **3.77**
Stremel et al. (2022) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Positive peer reporting vs. business as usual Participants: The study included three classrooms with a total of 20 students. Of the 20 students included in the study 19 were in grades 2–5, and 1 student was in grade 6. • 85% of the students were male. • 45% of the students were White, and 55% were Black. • All students received special education services and qualified as having an emotional or behavioral disorder. Setting: Three separate classrooms in an alternative school setting serving students identified with emotional or behavior disorders in the Midwestern United States.	Positive peer reporting (PPR) is a peer-mediated intervention designed to improve social relationships between children, using rewards and positive social attention. The intervention was implemented over the course of 11–13 intervention sessions that each lasted 45 minutes.	Student Behavior: **0.93**

Appendix C

Recommendation 1: Co-establish, model, and teach clear expectations for student behavior consistent with schoolwide expectations			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Tanol et al. (2010) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: The four focal students in the study attended kindergarten. • All four students were male and Native American. • One of the students received special education services. • All four students were identified by the teacher as engaging in disruptive behavior and at risk for having emotional or behavioral disorders. Setting: Two kindergarten classrooms in an urban public school focused on Native American culture and language.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. The intervention was implemented daily over the course of 8 weeks (40 sessions) and took place for 10 minutes during morning meetings.	Student Behavior: **2.47**
Vogelgesang et al. (2016) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Self-monitoring vs. business as usual Participants: The three focal students in the study attended grade 5. • Two students were female, and one student was male. • All three students were White. • One student had an ADHD diagnosis, and two students were at risk for ADHD. Setting: A general education classroom in an elementary school located in the Midwestern United States.	Self-monitoring is a strategy in which students are taught to be aware of a specific behavior, evaluate in their minds the extent to which they engage in the behavior during a specific time period, and then record whether they engaged in the behavior. The intervention was implemented over the course of 6 intervention sessions. Each session ranged from 45 to 60 minutes.	Student Behavior: **4.06**

Recommendation 1: Co-establish, model, and teach clear expectations for student behavior consistent with schoolwide expectations			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Williams et al. (2012) *Meets WWC standards without reservations*	Design: Randomized controlled trial Contrast: Direct Behavior Rating vs. business as usual Participants: The study sample consisted of 46 students attending grades 1–5. • 80% of the students were male. • 87% of the students were White, and 13% were Black. • All students were identified by their teacher as exhibiting behavioral concerns. Setting: Two K–5 elementary schools, one public and one private, in the Southeastern and Midwestern United States.	Direct Behavior Rating (DBR) is a rating-scale and point-based feedback form that reflects the student's performance on specific behavioral goals. In this study, DBR involved parents and teachers working together to alleviate students' classroom problems. Teachers evaluated and reported on students' daily behavioral performance, and parents were then responsible for delivering consequences based on that performance. In this study, two variants of emailed DBR were implemented: DBR only and DBR plus performance feedback (based on the quality of the DBR). The interventions were implemented daily over the course of 3 weeks.	Student Behavior: **0.81**
Note: Race/ethnicity categories under the Participants heading in each row may not add to 100 percent due to rounding and/or non–mutually exclusive categories of race/ethnicity; some studies did not report this information. [a] Statistically significant findings are bolded.			

Supplemental findings for Recommendation 1

Supplemental findings (intrapersonal competencies and teacher practice outcome measures) for three studies are available at the corresponding study page on the WWC website:

- Ialongo et al. (2019) [***Good Behavior Game* vs. business as usual**].
- Lynne et al. (2017) [***Good Behavior Game* vs. business as usual**].
- Williams et al. (2012) [***Direct Behavior Rating* vs. business as usual**].

Recommendation 2: Remind students to engage in expected behaviors

Rationale for a strong level of evidence

The WWC and the expert panel characterized **Recommendation 2** as supported by ***strong evidence*** based on 13 studies.[118]

One study meets WWC group design standards with reservations because it is a cluster randomized controlled trial with high individual-level nonresponse, but it provides evidence of effects on individuals by satisfying the baseline equivalence requirement for the individuals in the analytic intervention and comparison groups.[119] Seven studies meet WWC single-case design standards without reservations because they had a sufficient number of phases and data points in each phase to receive the highest rating.[120] Five studies meet WWC single-case design standards with reservations because they did not have enough data points in each phase to receive the highest rating.[121]

There were findings in one relevant outcome domain for this recommendation (**Table C.5**). This domain had a statistically significant, positive meta-analytic effect size: measures of student behavior ($g = 0.94$, $p < .01$).

Table C.5. Domain-level effect size across the 13 studies supporting Recommendation 2

Domain	Number of studies (*k*)	Total sample size (*N*)	Effect size (*g*)[a]	95% confidence interval	*p*-Value	Percentage of weight from studies that meet WWC standards without reservations
Student behavior	13	1,373	**0.94**	[0.81–1.07]	< .01	52.00

k is the number of studies with at least one outcome in the relevant domain that contributed to the meta-analytic effect size.

Note: The effect size was calculated using a fixed-effects meta-analytic effect size across studies.

[a] Statistically significant findings are bolded.

In the studies supporting this recommendation, the interventions were closely aligned with the practices outlined in the recommendation. The panel characterized this recommendation as supported by strong evidence. This rating was supported by the strength of the evidence according to the following criteria:

- **Extent of evidence.** The study samples included 1,373 students and at least 35 schools across multiple states in the United States.
- **Effects on relevant outcomes.** The outcome domain (measures of student behavior) had an effect size that was positive and statistically significant, with 52 percent of the meta-analytic weight from studies that meet WWC standards without reservations. This domain represented the only relevant outcome domain for this recommendation.
- **Relevance to scope.** The evidence examined teacher-delivered, low-intensity behavioral interventions implemented in classroom settings, included samples of focal students in grades K–5, and measured a student behavior outcome.

- **Relationship between the evidence and the recommendation.** In all 13 studies, reminding students to engage in expected behaviors was a major component of the intervention evaluated. The interventions involved teachers delivering different types of precorrections to guide students to engage in new or previously taught expected behaviors in the classroom.

Table C.6. Studies providing evidence for Recommendation 2

Recommendation 2: Remind students to engage in expected behaviors			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Dadakhodjaeva et al. (2019) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: The three focal students were in kindergarten and demonstrated high levels of disruptive behavior. • Two students were male, and one student was female. • All three students were Black. Setting: Three kindergarten classrooms in an urban public school in the Southeastern United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. In this study, the Good Behavior Game was typically played once each day for 10 minutes. The intervention was implemented over the course of 8–11 intervention sessions.	Student Behavior: **1.38**
Dillon et al. (2019) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Tootling vs. business as usual Participants: Three grade 5 classrooms with a total of 74 students participated in the study. • 53% of the students were female and 47% were male. • 64% of the students were White and 35% were Black. • 12% of the students had an individualized education plan. Setting: Three general education classrooms in two rural schools in the Southeastern United States.	Tootling is a procedure in which children report their peers' appropriate behaviors, using note cards, which are collected, read aloud to the class, and counted by the teacher. The count of tootles is then publicly posted, with rewards being provided to the entire class once a predetermined number of tootles have been submitted. The intervention was implemented at least three times per week during 20-minute class sessions. The intervention was implemented over the course of 11–13 intervention sessions.	Student Behavior: **1.21**

Recommendation 2: Remind students to engage in expected behaviors			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Fabiano et al. (2017) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Direct Behavior Rating vs. business as usual Participants: The three focal students in the study attended grades 4 and 5. • All three students were male. • Two students were White • One student was Hispanic. • One student had a 504 plan. Setting: General education classrooms in one public school and two parochial (Catholic) schools in the Northeastern United States.	Direct Behavior Rating (DBR) is a rating-scale and point-based feedback form that reflects the student's performance on specific behavioral goals. The intervention was implemented during math and English classes over the course of 12–16 intervention sessions.	Student Behavior: **0.68**
Hoff & Ervin (2013) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Self-management vs. business as usual Participants: The three focal students attended grade 2 and had been referred to the school's prereferral intervention team for disruptive behavior. • All three students were male. • Two of the students were diagnosed with ADHD. Setting: Three general education classrooms in a public school in the Midwestern United States.	The self-management intervention involves students rating their own behavior and the class behavior in relation to a set of predefined rules. Points received for positive ratings are exchanged for a class reward and displayed on a graph. The intervention was implemented during 45-minute math and reading class periods over the course of 9–16 intervention sessions.	Student Behavior: **1.17**

Recommendation 2: Remind students to engage in expected behaviors			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Ialongo et al. (2019) *Meets WWC standards with reservations*	Design: Randomized controlled trial Contrast: Good Behavior Game vs. business as usual Participants: The high-risk study subsample consisted of 1,114 students in kindergarten through grade 5. High-risk students scored in the top 33rd percentile on the aggressive-disruptive behavior scale of the Teacher Observation of Classroom Adaptation-Revised (TOCA-R) at baseline. • 61% of the high-risk students were male. • 94% of the high-risk students were Black, 3% were White, and less than 1% were Asian. • 3% percent of the high-risk students were Hispanic or Latino. • 93% of the high-risk students were eligible for free or reduced-price lunch. • 13% of the high-risk students received special education services. Setting: 18 elementary schools in one large urban school district in the Mid-Atlantic region of the United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. On average, the intervention was implemented 150 times over the course of a school year.	Student Behavior: -0.06

Recommendation 2: Remind students to engage in expected behaviors			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Lynne et al. (2017) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: 65 students referred by school administrators for their high levels of inappropriate behavior. • 51% of the students were male. • 95% of the students were White, 3% were Black. • 2% were Hispanic or Latino. • 20% were receiving special education services. Setting: One grade 1 and two grade 4 general education classrooms at a rural school in the Southeastern United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. In this study, the Good Behavior Game was typically played once each session for 20 minutes. The intervention was implemented over the course of 10–12 intervention sessions and took place during normal class activities.	Student Behavior: **0.73**
McHugh et al. (2016) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Tootling vs. business as usual Participants: The three focal students in the study attended grades 2 and 3. • Two students were male, and one student was female. • All three students were Black. • None of the students received special education services. Setting: General education classrooms at two public elementary schools in the Southeastern United States.	Tootling is a procedure in which children report their peers' appropriate behaviors, using note cards, which are collected, read aloud to the class, and counted by the teacher. The count of tootles is then publicly posted, with rewards being provided to the entire class once a predetermined number of tootles have been submitted. The intervention was implemented during one class period each day, which usually lasted 20–30 minutes for two of the classrooms and 60 minutes for one of the classrooms. The intervention was implemented over the course of 10–12 intervention sessions.	Student Behavior: 1.35

Recommendation 2: Remind students to engage in expected behaviors			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Murphy et al. (2020) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: The study involves three K–6 classrooms with a total of 22 students. • 68% of the students were male. • 68% of the students were Black, and 9% were White. • All students received special education services. Setting: Separate classrooms in an urban, nonpublic alternative education agency in the Midwestern United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. In this study, the Good Behavior Game was implemented daily over the course of 18 intervention sessions. Each Good Behavior Game session lasted 45 minutes.	Student Behavior: **0.63**
Radley et al. (2016) *Meets WWC standards with reservations*	Design: Single-case design Contrast: The Quiet Classroom Game vs. business as usual Participants: The study involved three grade 3 classrooms with a total of 56 students. • 54% of the students were male, and 46% of the students were female. • 96% of the students were Black • 4% of the students were Hispanic. Setting: Three general education classrooms in two public elementary schools in the Southeastern United States.	The Quiet Classroom Game involves establishing classwide noise expectations and goals, monitoring noise levels, and providing rewards for meeting noise goals. In this study, the intervention was implemented during 15-minute class periods over the course of 11–12 intervention sessions.	Student Behavior: **1.13**

Recommendation 2: Remind students to engage in expected behaviors			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Rafferty et al. (2011) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Self-monitoring vs. business as usual Participants: The three focal students in the study attended grade 5 and were between the ages of 10 and 11 years. • Two students were male, and one student was female. • All three students were White. • All three students had a diagnosis of ADHD. Two students also had other health impairments (unspecified), and one student also had a learning disability. Setting: A general education classroom at a rural elementary school in the Northeastern United States.	Self-monitoring is a strategy in which students are taught to be aware of a specific behavior, evaluate in their minds the extent to which they engage in the behavior during a specific time period, and then record whether they engaged in the behavior. The intervention was implemented over the course of 18 intervention sessions. Each session took place at the end of the day when students received 90 minutes of enrichment instruction.	Student Behavior: **3.77**
Stremel et al. (2022) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Positive peer reporting vs. business as usual Participants: The study included three classrooms with a total of 20 students. Of the 20 students included in the study 19 were in grades 2–5, and 1 student was in grade 6. • 85% of the students were male. • 45% of the students were White, and 55% were Black. • All students received special education services and qualified as having an emotional or behavioral disorder. Setting: Three separate classrooms in an alternative school setting serving students identified with emotional or behavior disorders in the Midwestern United States.	Positive peer reporting (PPR) is a peer-mediated intervention designed to improve social relationships between children, using rewards and positive social attention. The intervention was implemented over the course of 11–13 intervention sessions that each lasted 45 minutes.	Student Behavior: **0.93**

Recommendation 2: Remind students to engage in expected behaviors			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Tanol et al. (2010) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: The four focal students in the study attended kindergarten. • All four students were male and Native American. • One of the students received special education services. • All four students were identified by the teacher as engaging in disruptive behavior and at risk for having emotional or behavioral disorders. Setting: Two kindergarten classrooms in an urban public school focused on Native American culture and language.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. The intervention was implemented daily over the course of 8 weeks (40 sessions) and took place for 10 minutes during morning meetings.	Student Behavior: **2.47**
Vogelgesang et al. (2016) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Self-monitoring vs. business as usual Participants: The three focal students in the study attended grade 5. • Two students were female, and one student was male. • All three students were White. • One student had an ADHD diagnosis, and two students were at risk for ADHD. Setting: A general education classroom in an elementary school located in the Midwestern United States.	Self-monitoring is a strategy in which students are taught to be aware of a specific behavior, evaluate in their minds the extent to which they engage in the behavior during a specific time period, and then record whether they engaged in the behavior. The intervention was implemented over the course of 6 intervention sessions. Each session ranged from 45 to 60 minutes.	Student Behavior: **4.06**

Note: Race/ethnicity categories under the Participants heading in each row may not add to 100 percent due to rounding and/or non–mutually exclusive categories of race/ethnicity; some studies did not report this information.

[a] Statistically significant findings are bolded.

Appendix C

Supplemental findings for Recommendation 2

Supplemental findings (intrapersonal competencies and teacher practice outcome measures) for two studies are available at the corresponding study page on the WWC website:

- Ialongo et al. (2019) [***Good Behavior Game* vs. business as usual**].
- Lynne et al. (2017) [***Good Behavior Game* vs. business as usual**].

Recommendation 3: Acknowledge students for demonstrating expected behaviors through positive attention, praise, and rewards

Rationale for a strong level of evidence

The WWC and the expert panel characterized **Recommendation 3** as supported by ***strong evidence*** based on 16 studies.[122]

One study meets WWC group design standards without reservations because it is a randomized controlled trial with low attrition.[123] One study meets WWC group design standards with reservations because it is a cluster randomized controlled trial with high individual-level nonresponse, but it provides evidence of effects on individuals by satisfying the baseline equivalence requirement for the individuals in the analytic intervention and comparison groups.[124] Nine studies meet WWC single-case design standards without reservations because they had a sufficient number of phases and data points in each phase to receive the highest rating.[125] Five studies meet WWC single-case design standards with reservations because they did not have enough data points in each phase to receive the highest rating.[126]

There were findings in one relevant outcome domain for this recommendation (**Table C.7**). This domain had a statistically significant, positive meta-analytic effect size: measures of student behavior ($g = 0.94$, $p < .01$).

Table C.7. Domain-level effect size across the 16 studies supporting Recommendation 3

Domain	Number of studies (*k*)	Total sample size (*N*)	Effect size (*g*)[a]	95% confidence interval	*p*-Value	Percentage of weight from studies that meet WWC standards without reservations
Student behavior	16	1,471	**0.94**	[0.83–1.06]	< .01	55.00

k is the number of studies with at least one outcome in the relevant domain that contributed to the meta-analytic effect size.

Note: The effect size was calculated using a fixed-effects meta-analytic effect size across studies.

[a] Statistically significant findings are bolded.

In the studies supporting this recommendation, the interventions were closely aligned with the practices outlined in the recommendation. The panel characterized this recommendation as supported by strong evidence. This rating was supported by the strength of the evidence according to the following criteria:

- **Extent of evidence.** The study samples included 1,471 students and at least 39 schools across multiple states.
- **Effects on relevant outcomes.** The outcome domain (measures of student behavior) had an effect size that was positive and statistically significant, with 55 percent of the meta-analytic weight from studies that meet WWC standards without reservations. This domain represented the only relevant outcome domain for this recommendation.

- **Relevance to scope.** The evidence examined teacher-delivered, low-intensity behavioral interventions implemented in classroom settings, included samples of focal students in grades K-5, and measured a student behavior outcome.
- **Relationship between the evidence and the recommendation.** In all 16 studies, acknowledging students for engaging in expected behaviors was a major component of the intervention evaluated. Interventions involved teachers acknowledging students by providing verbal praise for meeting clear behavior expectations or demonstrating appropriate classroom behavior and/or rewarding students who meet clear behavior expectations through small rewards.

Table C.8. Studies providing evidence for Recommendation 3

Recommendation 3: Acknowledge students for demonstrating expected behaviors through positive attention, praise, and rewards			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Dadakhodjaeva et al. (2019) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: The three focal students were in kindergarten and demonstrated high levels of disruptive behavior. • Two students were male, and one student was female. • All three students were Black. Setting: Three kindergarten classrooms in an urban public school in the Southeastern United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. In this study, the Good Behavior Game was typically played once each day for 10 minutes. The intervention was implemented over the course of 8–11 intervention sessions.	Student Behavior: **1.38**

Recommendation 3: Acknowledge students for demonstrating expected behaviors through positive attention, praise, and rewards			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Dillon et al. (2019) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Tootling vs. business as usual Participants: Three grade 5 classrooms with a total of 74 students participated in the study. • 53% of the students were female and 47% were male. • 64% of the students were White and 35% were Black. • 12% of the students had an individualized education plan. Setting: Three general education classrooms in two rural schools in the Southeastern United States.	Tootling is a procedure in which children report their peers' appropriate behaviors, using note cards, which are collected, read aloud to the class, and counted by the teacher. The count of tootles is then publicly posted, with rewards being provided to the entire class once a predetermined number of tootles have been submitted. The intervention was implemented at least three times per week during 20-minute class sessions. The intervention was implemented over the course of 11–13 intervention sessions.	Student Behavior: **1.21**
Fabiano et al. (2017) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Direct Behavior Rating vs. business as usual Participants: The three focal students in the study attended grades 4 and 5. • All three students were male. • Two students were White • One student was Hispanic. • One student had a 504 plan. Setting: General education classrooms in one public school and two parochial (Catholic) schools in the Northeastern United States.	Direct Behavior Rating (DBR) is a rating-scale and point-based feedback form that reflects the student's performance on specific behavioral goals. The intervention was implemented during math and English classes over the course of 12–16 intervention sessions.	Student Behavior: **0.68**

Recommendation 3: Acknowledge students for demonstrating expected behaviors through positive attention, praise, and rewards			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Hoff & Ervin (2013) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Self-management vs. business as usual Participants: The three focal students attended grade 2 and had been referred to the school's prereferral intervention team for disruptive behavior. • All three students were male. • Two of the students were diagnosed with ADHD. Setting: Three general education classrooms in a public school in the Midwestern United States.	The self-management intervention involves students rating their own behavior and the class behavior in relation to a set of predefined rules. Points received for positive ratings are exchanged for a class reward and displayed on a graph. The intervention was implemented during 45-minute math and reading class periods over the course of 9–16 intervention sessions.	Student Behavior: **1.17**

Recommendation 3: Acknowledge students for demonstrating expected behaviors through positive attention, praise, and rewards			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Ialongo et al. (2019) *Meets WWC standards with reservations*	Design: Randomized controlled trial Contrast: Good Behavior Game vs. business as usual Participants: The high-risk study subsample consisted of 1,114 students in kindergarten through grade 5. High-risk students scored in the top 33rd percentile on the aggressive-disruptive behavior scale of the Teacher Observation of Classroom Adaptation-Revised (TOCA-R) at baseline. • 61% of the high-risk students were male. • 94% of the high-risk students were Black, 3% were White, and less than 1% were Asian. • 3% percent of the high-risk students were Hispanic or Latino. • 93% of the high-risk students were eligible for free or reduced-price lunch. • 13% of the high-risk students received special education services. Setting: 18 elementary schools in one large urban school district in the Mid-Atlantic region of the United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. On average, the intervention was implemented 150 times over the course of a school year.	Student Behavior: -0.06

Recommendation 3: Acknowledge students for demonstrating expected behaviors through positive attention, praise, and rewards			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Lynne et al. (2017) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: 65 students referred by school administrators for their high levels of inappropriate behavior. • 51% of the students were male. • 95% of the students were White, 3% were Black. • 2% were Hispanic or Latino. • 20% were receiving special education services. Setting: One grade 1 and two grade 4 general education classrooms at a rural school in the Southeastern United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. In this study, the Good Behavior Game was typically played once each session for 20 minutes. The intervention was implemented over the course of 10–12 intervention sessions and took place during normal class activities.	Student Behavior: **0.73**
Markelz et al. (2019) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Behavior-specific praise vs. business as usual Participants: The three focal students in the study attended grades 2–4. • All three students were male. • One student had a diagnosis of autism, one student had a diagnosis of emotional disturbance, and one student had a diagnosis of intellectual disability. • The three teachers in the study were female. All three teachers were certified special educators with 2–10 years of experience in an emotional support classroom. Setting: Separate classrooms in an urban elementary school in the Northeastern United States.	Behavior-specific praise (BSP) involves teachers giving students specific, positive verbal feedback indicating approval of social or academic performance. The intervention was implemented over the course of 9–14 intervention sessions of 20 minutes each.	Student Behavior: **2.66**

Recommendation 3: Acknowledge students for demonstrating expected behaviors through positive attention, praise, and rewards			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
McHugh et al. (2016) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Tootling vs. business as usual Participants: The three focal students in the study attended grades 2 and 3. • Two students were male, and one student was female. • All three students were Black. • None of the students received special education services. Setting: General education classrooms at two public elementary schools in the Southeastern United States.	Tootling is a procedure in which children report their peers' appropriate behaviors, using note cards, which are collected, read aloud to the class, and counted by the teacher. The count of tootles is then publicly posted, with rewards being provided to the entire class once a predetermined number of tootles have been submitted. The intervention was implemented during one class period each day, which usually lasted 20–30 minutes for two of the classrooms and 60 minutes for one of the classrooms. The intervention was implemented over the course of 10–12 intervention sessions.	Student Behavior: 1.35
Murphy et al. (2020) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: The study involves three K–6 classrooms with a total of 22 students. • 68% of the students were male. • 68% of the students were Black, and 9% were White. • All students received special education services. Setting: Separate classrooms in an urban, nonpublic alternative education agency in the Midwestern United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. In this study, the Good Behavior Game was implemented daily over the course of 18 intervention sessions. Each Good Behavior Game session lasted 45 minutes.	Student Behavior: **0.63**

Recommendation 3: Acknowledge students for demonstrating expected behaviors through positive attention, praise, and rewards			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
O'Handley et al. (2018) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Behavior-specific praise vs. business as usual Participants: The study involved three teachers and their classrooms (two grade 5 and one grade 1) with a total of 47 students. • 55% of the students were male. • All students in the classrooms were Black. • 26% of the students received additional behavioral support. Setting: Three general education classrooms in the same school. No information on the location or urbanicity of the school was provided.	Behavior-specific praise (BSP) involves teachers giving students specific, positive verbal feedback indicating approval of social or academic performance.	Student Behavior: **0.77**
Radley et al. (2016) *Meets WWC standards with reservations*	Design: Single-case design Contrast: The Quiet Classroom Game vs. business as usual Participants: The study involved three grade 3 classrooms with a total of 56 students. • 54% of the students were male, and 46% of the students were female. • 96% of the students were Black • 4% of the students were Hispanic. Setting: Three general education classrooms in two public elementary schools in the Southeastern United States.	The Quiet Classroom Game involves establishing classwide noise expectations and goals, monitoring noise levels, and providing rewards for meeting noise goals. In this study, the intervention was implemented during 15-minute class periods over the course of 11–12 intervention sessions.	Student Behavior: **1.13**

Recommendation 3: Acknowledge students for demonstrating expected behaviors through positive attention, praise, and rewards			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Rivera et al. (2015) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Behavior-contingent praise Participants: The five focal students attended kindergarten, grade 4, and grade 5 (between the ages of 6 and 10 years). • Three students were female, and two students were male. • One student was White. • Four students were Hispanic. • One student had autism; two students had autism and an intellectual disability; one student had had autism, an intellectual disability, and cerebral palsy; and one student had autism and ADHD. • All students had behavior intervention plans included with their individualized education plan and were selected for the study due to high rates of off-task behavior. Setting: Two separate classrooms at a suburban elementary school in the Southwestern United States.	Behavior-contingent praise involves praise from a teacher for on-task student behavior, designed to increase a student's time on task, done with support of technology.	Student Behavior: **0.85**

Recommendation 3: Acknowledge students for demonstrating expected behaviors through positive attention, praise, and rewards			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Stremel et al. (2022) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Positive peer reporting vs. business as usual Participants: The study included three classrooms with a total of 20 students. Of the 20 students included in the study 19 were in grades 2–5, and 1 student was in grade 6. • 85% of the students were male. • 45% of the students were White, and 55% were Black. • All students received special education services and qualified as having an emotional or behavioral disorder. Setting: Three separate classrooms in an alternative school setting serving students identified with emotional or behavior disorders in the Midwestern United States.	Positive peer reporting (PPR) is a peer-mediated intervention designed to improve social relationships between children, using rewards and positive social attention. The intervention was implemented over the course of 11–13 intervention sessions that each lasted 45 minutes.	Student Behavior: **0.93**
Tanol et al. (2010) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: The four focal students in the study attended kindergarten. • All four students were male and Native American. • One of the students received special education services. • All four students were identified by the teacher as engaging in disruptive behavior and at risk for having emotional or behavioral disorders. Setting: Two kindergarten classrooms in an urban public school focused on Native American culture and language.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. The intervention was implemented daily over the course of 8 weeks (40 sessions) and took place for 10 minutes during morning meetings.	Student Behavior: **2.47**

Recommendation 3: Acknowledge students for demonstrating expected behaviors through positive attention, praise, and rewards			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Vogelgesang et al. (2016) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Self-monitoring vs. business as usual Participants: The three focal students in the study attended grade 5. • Two students were female, and one student was male. • All three students were White. • One student had an ADHD diagnosis, and two students were at risk for ADHD. Setting: A general education classroom in an elementary school located in the Midwestern United States.	Self-monitoring is a strategy in which students are taught to be aware of a specific behavior, evaluate in their minds the extent to which they engage in the behavior during a specific time period, and then record whether they engaged in the behavior. The intervention was implemented over the course of 6 intervention sessions. Each session ranged from 45 to 60 minutes.	Student Behavior: **4.06**
Williams et al. (2012) *Meets WWC standards without reservations*	Design: Randomized controlled trial Contrast: Direct Behavior Rating vs. business as usual Participants: The study sample consisted of 46 students attending grades 1–5. • 80% of the students were male. • 87% of the students were White, and 13% were Black. • All students were identified by their teacher as exhibiting behavioral concerns. Setting: Two K–5 elementary schools, one public and one private, in the Southeastern and Midwestern United States.	Direct Behavior Rating (DBR) is a rating-scale and point-based feedback form that reflects the student's performance on specific behavioral goals. In this study, DBR involved parents and teachers working together to alleviate students' classroom problems. Teachers evaluated and reported on students' daily behavioral performance, and parents were then responsible for delivering consequences based on that performance. In this study, two variants of emailed DBR were implemented: DBR only and DBR plus performance feedback (based on the quality of the DBR). The interventions were implemented daily over the course of 3 weeks.	Student Behavior: **0.81**

Note: Race/ethnicity categories under the Participants heading in each row may not add to 100 percent due to rounding and/or non–mutually exclusive categories of race/ethnicity; some studies did not report this information.

[a] Statistically significant findings are bolded.

Appendix C

Supplemental findings for Recommendation 3

Supplemental findings (interpersonal competencies and teacher practice outcome measures) for six studies are available at the corresponding study page on the WWC website:

- Ialongo et al. (2019) [***Good Behavior Game* vs. business as usual**].
- Lynne et al. (2017) [***Good Behavior Game* vs. business as usual**].
- Markelz et al. (2019) [***Behavior-Specific Praise* vs. business as usual**].
- O'Handley et al. (2018) [***Behavior-Specific Praise* vs. business as usual**].
- Rivera et al. (2015) [***Behavior-Specific Praise* vs. business as usual**].
- Williams et al. (2012) [***Direct Behavior Rating* vs. business as usual**].

Recommendation 4: Offer instructional choices to students to increase engagement and agency

Rationale for a moderate level of evidence

The WWC and the expert panel characterized **Recommendation 4** as supported by ***moderate evidence*** based on three studies.[127]

Two studies meet WWC single-case design standards without reservations because they had a sufficient number of phases and data points in each phase to receive the highest rating.[128] One study met WWC single-case design standards with reservations because it did not have enough data points in each phase to receive the highest rating.[129]

There were findings in one relevant outcome domain for this recommendation (**Table C.9**). This domain had a statistically significant, positive meta-analytic effect size: measures of student behavior ($g = 0.73$, $p < .01$).

Table C.9. Domain-level effect size across the three studies supporting Recommendation 4

Domain	Number of studies (*k*)	Total sample size (*N*)	Effect size (*g*)[a]	95% confidence interval	*p*-Value	Percentage of weight from studies that meet WWC standards without reservations
Student behavior	3	13	**0.73**	[0.50–0.96]	< .01	100.00

k is the number of studies with at least one outcome in the relevant domain that contributed to the meta-analytic effect size.

Note: The effect size was calculated using a fixed-effects meta-analytic effect size across studies.

[a] Statistically significant findings are bolded.

In the studies supporting this recommendation, the interventions were closely aligned with the practices outlined in the recommendation. The panel characterized this recommendation as supported by moderate evidence. This rating was supported by the strength of the evidence according to the following criteria:

- **Extent of evidence.** The study samples included 13 students and at least six schools.
- **Effects on relevant outcomes.** The outcome domain (measures of student behavior) had an effect size that was positive and statistically significant, with 100 percent of the meta-analytic weight from studies that meet WWC standards without reservations. This domain represented the only relevant outcome domain for this recommendation.
- **Relevance to scope.** The evidence examined teacher-delivered, low-intensity behavioral interventions implemented in classroom settings, included samples of focal students in grades K-5, and measured a student behavior outcome.
- **Relationship between the evidence and the recommendation.** In all three studies, offering instructional choices to students was a major component of the intervention evaluated. Interventions involved teachers offering students within-activity or across-activity choices to promote active engagement.

Table C.10. Studies providing evidence for Recommendation 4

Recommendation 4: Offer instructional choices to students to increase engagement and agency			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Ennis et al. (2018) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Instructional Choice vs. business as usual Participants: The four focal students attended grade 3 and were identified as with or at risk for behavioral challenges and academic underachievement. • Three students were male, and one was female. • One student was Black, and one was White. • Two students were Hispanic and English learner students. • None of the students was participating in special education services. Setting: Four general education classrooms at two public elementary schools in one large, suburban school district in the Southeastern United States.	Instructional Choice is a strategy where an individual or group is provided with two or more options and allowed to independently select an option. The selected option is then provided. Choices can be divided into two main categories—within activity (how to engage in an activity) or across activities (which activity to engage in). In this study, the intervention used both within-activity and across-activity choices and took place during 45- to 60-minute math lessons. The intervention was implemented over the course of 15–29 intervention sessions.	Student Behavior: **0.50**
Ennis et al. (2020) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Instructional Choice vs. business as usual Participants: The three focal students attended grade 3. • Two students were female, and one student was male. • One student was Hispanic and an English learner student. • None of the students was participating in special education services. Setting: Three general education classrooms located in two public elementary schools in one large, suburban school district in the Southeastern United States.	Instructional Choice is a strategy where an individual or group is provided with two or more options and allowed to independently select an option. The selected option is then provided. Choices can be divided into two main categories—within activity (how to engage in an activity) or across activities (which activity to engage in). In this study, the instructional choice intervention used across-activity choices and took place during 15-minute reading rotations (individual and group work). The intervention was implemented over the course of 7–15 intervention sessions.	Student Behavior: **0.78**

Recommendation 4: Offer instructional choices to students to increase engagement and agency			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Ennis et al. (2021) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Instructional Choice vs. business as usual Participants: The six focal students in the study attended grades 2 and 3. • Five students were male, and one student was female. • Five students were White, and one student was Black. • One student had an individualized education program. Setting: Six general education classrooms in two suburban public schools in the Southeastern United States.	Instructional Choice is a strategy where an individual or group is provided with two or more options and allowed to independently select an option. The selected option is then provided. Choices can be divided into two main categories—within activity (how to engage in an activity) or across activities (which activity to engage in). In this study, instructional choice took the form of offering students within-activity choices during reading instruction (individual and group work). The intervention was implemented over the course of 14–24 sessions.	Student Behavior: **1.00**
Note: Race/ethnicity categories under the Participants heading in each row may not add to 100 percent due to rounding and/or non–mutually exclusive categories of race/ethnicity; some studies did not report this information. [a] Statistically significant findings are bolded.			

Supplemental findings for Recommendation 4

No supplemental findings are available.

Recommendation 5: Provide students frequent and varying opportunities to respond to and engage in activities

Rationale for a moderate level of evidence

The WWC and the expert panel characterized **Recommendation 5** as supported by ***moderate evidence*** based on two studies.[130]

One study meets WWC single-case design standards without reservations because it had a sufficient number of phases and data points in each phase to receive the highest rating.[131] One study meets WWC single-case design standards with reservations because it did not have enough data points in each phase to receive the highest rating.[132]

There were findings in one relevant outcome domain for this recommendation (**Table C.11**). This domain had a statistically significant, positive meta-analytic effect size: measures of student behavior ($g = 9.54$, $p < .01$).

The magnitude of the effect size for this recommendation should be interpreted cautiously. The domain effect size was substantially influenced by the effect size from Clarke et al. (2016). Without the inclusion of Clarke et al. (2016), the effect size remains statistically significant and positive but is reduced in magnitude ($g = 3.20$, $p < .05$, 95% CI [0.66, 5.73]). Other studies attempting to replicate the results with different students or using broader measures of student engagement may not have effect sizes as large as were observed in this study. However, the panel believed that Clarke et al. (2016) demonstrated that providing students with the opportunity to respond is effective in increasing student engagement and represented evidence that should be included in this practice guide.

Table C.11. Domain-level effect size across the two studies supporting Recommendation 5

Domain	Number of studies (*k*)	Total sample size (*N*)	Effect size (*g*)[a]	95% confidence interval	*p*-Value	Percentage of weight from studies that meet WWC standards without reservations
Student behavior	2	9	**9.54**	[7.29–11.79]	< .01	79.00

k is the number of studies with at least one outcome in the relevant domain that contributed to the meta-analytic effect size.

Note: The effect size was calculated using a fixed-effects meta-analytic effect size across studies.

[a] Statistically significant findings are bolded.

In the studies supporting this recommendation, the interventions were closely aligned with the practices outlined in the recommendation. The panel characterized this recommendation as supported by moderate evidence. This rating was supported by the strength of the evidence according to the following criteria:

- **Extent of evidence.** The study samples included nine students and at least two schools in the United States and Canada.

- **Effects on relevant outcomes.** The outcome domain (measures of student behavior) had an effect size that was positive and statistically significant, with 79 percent of the meta-analytic weight from studies that meet WWC standards without reservations. This domain represented the only relevant outcome domain for this recommendation.
- **Relevance to scope.** The evidence examined teacher-delivered, low-intensity behavioral interventions implemented in classroom settings, included samples of focal students in grades K-5, and measured a student behavior outcome.
- **Relationship between the evidence and the recommendation.** In both studies, providing students frequent and varying opportunities to respond was a major component of the intervention evaluated. Interventions involved teachers preparing questions and providing students with preprinted response cards to promote active student responding during instruction.

Table C.12. Studies providing evidence for Recommendation 5

Recommendation 5: Provide students frequent and varying opportunities to respond to and engage in activities			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Clarke et al. (2016) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Response Cards vs. business as usual Participants: The four focal students attended grade 3 and were between the ages of 8 and 9 years. • Two of the students were female, and two students were male. • All four students were identified as having an intellectual disability and a speech language impairment, had an individualized education program, and were selected because they had very low rates of responding to teacher questions. Setting: A general education classroom at a public elementary school in the rural Midwestern United States.	Response Cards is an instructional strategy where students are asked to simultaneously hold up boards, preprinted cards, or signs in response to teacher questions. The intervention was delivered during science and social studies instruction, which was scheduled for 45 minutes per afternoon, over the course of 12 intervention sessions.	Student Behavior: **33.39**[b]

Recommendation 5: Provide students frequent and varying opportunities to respond to and engage in activities			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Munro & Stephenson (2009) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Response Cards vs. business as usual. Participants: The five focal students in the study were ages 10-11 years. The students were identified by the teacher as reluctant to respond during whole-class question-and-answer. • English was the home language of two students who had a history of school-related anxiety and excessive absences. • Three students had emigrated from China, Pakistan, and Iran, respectively, 2–4 years prior to the study. Setting: A general education classroom at an inner-city public school in British Columbia, Canada.	Response Cards is an instructional strategy where students are asked to simultaneously hold up boards, preprinted cards, or signs in response to teacher questions. The use of Response Cards was implemented during 30-minute whole-class English vocabulary instruction over the course of 11 intervention sessions.	Student Behavior: 3.20

Note: Race/ethnicity categories under the Participants heading in each row may not add to 100 percent due to rounding and/or non–mutually exclusive categories of race/ ethnicity; some studies did not report this information.

[a] Statistically significant findings are bolded.

[b] The magnitude of this effect size reflects minimal variability in both the baseline and intervention phases. The target students almost never behaved in the expected way prior to the intervention, and then behaved as expected nearly all of the time after the intervention was implemented.

Supplemental findings for Recommendation 5

No supplemental findings are available.

Recommendation 6: Teach students to monitor and reflect on their own behavior

Rationale for a moderate level of evidence

The WWC and the expert panel characterized **Recommendation 6** as supported by ***moderate evidence*** based on three studies.[133]

One study meets WWC single-case design standards without reservations because it had a sufficient number of phases and data points in each phase to receive the highest rating.[134] Two studies meet WWC single-case design standards with reservations because they did not have enough data points in each phase to receive the highest rating.[135]

There were findings in one relevant outcome domain for this recommendation (**Table C.13**). This domain had a statistically significant, positive meta-analytic effect size: measures of student behavior ($g = 2.04$, $p < .01$).

Table C.13. Domain-level effect size across the three studies supporting Recommendation 6

Domain	Number of studies (*k*)	Total sample size (*N*)	Effect size (*g*)[a]	95% confidence interval	*p*-Value	Percentage of weight from studies that meet WWC standards without reservations
Student behavior	2	9	**2.04**	[1.47–2.61]	< .01	69.00

k is the number of studies with at least one outcome in the relevant domain that contributed to the meta-analytic effect size.

Note: The effect size was calculated using a fixed-effects meta-analytic effect size across studies.

[a] Statistically significant findings are bolded.

In the studies supporting this recommendation, the interventions were closely aligned with the practices outlined in the recommendation. The panel characterized this recommendation as supported by moderate evidence. This rating was supported by the strength of the evidence according to the following criteria:

- **Extent of evidence.** The study samples included nine students and at least three schools in multiple states.
- **Effects on relevant outcomes.** The outcome domain (measures of student behavior) had an effect size that was positive and statistically significant, with 69 percent of the meta-analytic weight from studies that meet WWC standards without reservations. This domain represented the only relevant outcome domain for this recommendation.
- **Relevance to scope.** The evidence examined teacher-delivered, low-intensity behavioral interventions implemented in classroom settings, included samples of focal students in grades K–5, and measured a student behavior outcome.

- **Relationship between the evidence and the recommendation.** In all studies, teaching students to monitor and reflect on their own classroom behavior was a major component of the intervention evaluated. Interventions involved teachers teaching students to monitor and record their own expected behaviors in the classroom.

Table C.14. Studies providing evidence for Recommendation 6

Recommendation 6: Teach students to monitor and reflect on their own behavior			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Hoff & Ervin (2013) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Self-management vs. business as usual Participants: The three focal students attended grade 2 and had been referred to the school's prereferral intervention team for disruptive behavior. • All three students were male. • Two of the students were diagnosed with ADHD. Setting: Three general education classrooms in a public school in the Midwestern United States.	The self-management intervention involves students rating their own behavior and the class behavior in relation to a set of predefined rules. Points received for positive ratings are exchanged for a class reward and displayed on a graph. The intervention was implemented during 45-minute math and reading class periods over the course of 9–16 intervention sessions.	Student Behavior: **1.17**
Rafferty et al. (2011) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Self-monitoring vs. business as usual Participants: The three focal students in the study attended grade 5 and were between the ages of 10 and 11 years. • Two students were male, and one student was female. • All three students were White. • All three students had a diagnosis of ADHD. Two students also had other health impairments (unspecified), and one student also had a learning disability. Setting: A general education classroom at a rural elementary school in the Northeastern United States.	Self-monitoring is a strategy in which students are taught to be aware of a specific behavior, evaluate in their minds the extent to which they engage in the behavior during a specific time period, and then record whether they engaged in the behavior. The intervention was implemented over the course of 18 intervention sessions. Each session took place at the end of the day when students received 90 minutes of enrichment instruction.	Student Behavior: **3.77**

Recommendation 6: Teach students to monitor and reflect on their own behavior			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Vogelgesang et al. (2016) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Self-monitoring vs. business as usual Participants: The three focal students in the study attended grade 5. • Two students were female, and one student was male. • All three students were White. • One student had an ADHD diagnosis, and two students were at risk for ADHD. Setting: A general education classroom in an elementary school located in the Midwestern United States.	Self-monitoring is a strategy in which students are taught to be aware of a specific behavior, evaluate in their minds the extent to which they engage in the behavior during a specific time period, and then record whether they engaged in the behavior. The intervention was implemented over the course of 6 intervention sessions. Each session ranged from 45 to 60 minutes.	Student Behavior: **4.06**
Note: Race/ethnicity categories under the Participants heading in each row may not add to 100 percent due to rounding and/or non–mutually exclusive categories of race/ethnicity; some studies did not report this information. [a] Statistically significant findings are bolded.			

Supplemental findings for Recommendation 6

No supplemental findings are available.

Recommendation 7: Use behavior ratings to provide feedback to students

Rationale for a strong level of evidence

The WWC and the expert panel characterized **Recommendation 7** as supported by ***strong evidence*** based on 12 studies.[136]

One study meets WWC group design standards without reservations because it is a randomized controlled trial with low attrition.[137] One study meets WWC group design standards with reservations because it is a cluster randomized controlled trial with high individual-level nonresponse, but it provides evidence of effects on individuals by satisfying the baseline equivalence requirement for the individuals in the analytic intervention and comparison groups.[138] Seven studies meet WWC single-case design standards without reservations because they have a sufficient number of phases and data points in each phase to receive the highest rating.[139] Three studies meet WWC single-case design standards with reservations because they do not have enough data points in each phase to receive the highest rating.[140]

There were findings in one relevant outcome domain for this recommendation (**Table C.15**). This domain had a statistically significant, positive meta-analytic effect size: measures of student behavior ($g = 0.89$, $p < .01$).

Table C.15. Domain-level effect size across the 12 studies supporting Recommendation 7

Domain	Number of studies (*k*)	Total sample size (*N*)	Effect size (*g*)[a]	95% confidence interval	*p*-Value	Percentage of weight from studies that meet WWC standards without reservations
Student behavior	12	1,360	**0.89**	[0.76–1.03]	< .01	62.00

k is the number of studies with at least one outcome in the relevant domain that contributed to the meta-analytic effect size.

Note: The effect size was calculated using a fixed-effects meta-analytic effect size across studies.

[a] Statistically significant findings are bolded.

In the studies supporting this recommendation, the interventions were closely aligned with the practices outlined in the recommendation. The panel characterized this recommendation as supported by strong evidence. This rating was supported by the strength of the evidence according to the following criteria:

- **Extent of evidence.** The study samples included 1,360 students and at least 34 schools across multiple states.
- **Effects on relevant outcomes.** The outcome domain (measures of student behavior) had an effect size that was positive and statistically significant, with 62 percent of the meta-analytic weight from studies that meet WWC standards without reservations. This domain represented the only relevant outcome domain for this recommendation.

- **Relevance to scope.** The evidence examined teacher-delivered, low-intensity behavioral interventions implemented in classroom settings, included samples of focal students in grades K-5, and measured a student behavior outcome.
- **Relationship between the evidence and the recommendation.** In all 12 studies, providing students feedback for demonstrating expected behaviors or teaching them to provide feedback on their peers' expected behaviors were major components of the intervention evaluated. Interventions involved teachers assessing student behavior using predetermined criteria (clearly defined behaviors), recording these ratings, and providing students with feedback and acknowledgment based on their performance.

Table C.16. Studies providing evidence for Recommendation 7

Recommendation 7: Use behavior ratings to provide feedback to students			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Dadakhodjaeva et al. (2019) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: The three focal students were in kindergarten and demonstrated high levels of disruptive behavior. • Two students were male, and one student was female. • All three students were Black. Setting: Three kindergarten classrooms in an urban public school in the Southeastern United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. In this study, the Good Behavior Game was typically played once each day for 10 minutes. The intervention was implemented over the course of 8–11 intervention sessions.	Student Behavior: **1.38**
Dillon et al. (2019) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Tootling vs. business as usual Participants: Three grade 5 classrooms with a total of 74 students participated in the study. • 53% of the students were female and 47% were male. • 64% of the students were White and 35% were Black. • 12% of the students had an individualized education plan. Setting: Three general education classrooms in two rural schools in the Southeastern United States.	Tootling is a procedure in which children report their peers' appropriate behaviors, using note cards, which are collected, read aloud to the class, and counted by the teacher. The count of tootles is then publicly posted, with rewards being provided to the entire class once a predetermined number of tootles have been submitted. The intervention was implemented at least three times per week during 20-minute class sessions. The intervention was implemented over the course of 11–13 intervention sessions.	Student Behavior: **1.21**

Recommendation 7: Use behavior ratings to provide feedback to students			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Fabiano et al. (2017) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Direct Behavior Rating vs. business as usual Participants: The three focal students in the study attended grades 4 and 5. • All three students were male. • Two students were White • One student was Hispanic. • One student had a 504 plan. Setting: General education classrooms in one public school and two parochial (Catholic) schools in the Northeastern United States.	Direct Behavior Rating (DBR) is a rating-scale and point-based feedback form that reflects the student's performance on specific behavioral goals. The intervention was implemented during math and English classes over the course of 12–16 intervention sessions.	Student Behavior: **0.68**
Hoff & Ervin (2013) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Self-management vs. business as usual Participants: The three focal students attended grade 2 and had been referred to the school's prereferral intervention team for disruptive behavior. • All three students were male. • Two of the students were diagnosed with ADHD. Setting: Three general education classrooms in a public school in the Midwestern United States.	The self-management intervention involves students rating their own behavior and the class behavior in relation to a set of predefined rules. Points received for positive ratings are exchanged for a class reward and displayed on a graph. The intervention was implemented during 45-minute math and reading class periods over the course of 9–16 intervention sessions.	Student Behavior: **1.17**

Recommendation 7: Use behavior ratings to provide feedback to students			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Ialongo et al. (2019) *Meets WWC standards with reservations*	Design: Randomized controlled trial Contrast: Good Behavior Game vs. business as usual Participants: The high-risk study subsample consisted of 1,114 students in kindergarten through grade 5. High-risk students scored in the top 33rd percentile on the aggressive-disruptive behavior scale of the Teacher Observation of Classroom Adaptation-Revised (TOCA-R) at baseline. • 61% of the high-risk students were male. • 94% of the high-risk students were Black, 3% were White, and less than 1% were Asian. • 3% percent of the high-risk students were Hispanic or Latino. • 93% of the high-risk students were eligible for free or reduced-price lunch. • 13% of the high-risk students received special education services. Setting: 18 elementary schools in one large urban school district in the Mid-Atlantic region of the United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. On average, the intervention was implemented 150 times over the course of a school year.	Student Behavior: -0.06

Recommendation 7: Use behavior ratings to provide feedback to students			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Lynne et al. (2017) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: 65 students referred by school administrators for their high levels of inappropriate behavior. • 51% of the students were male. • 95% of the students were White, 3% were Black. • 2% were Hispanic or Latino. • 20% were receiving special education services. Setting: One grade 1 and two grade 4 general education classrooms at a rural school in the Southeastern United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. In this study, the Good Behavior Game was typically played once each session for 20 minutes. The intervention was implemented over the course of 10–12 intervention sessions and took place during normal class activities.	Student Behavior: **0.73**
McHugh et al. (2016) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Tootling vs. business as usual Participants: The three focal students in the study attended grades 2 and 3. • Two students were male, and one student was female. • All three students were Black. • None of the students received special education services. Setting: General education classrooms at two public elementary schools in the Southeastern United States.	Tootling is a procedure in which children report their peers' appropriate behaviors, using note cards, which are collected, read aloud to the class, and counted by the teacher. The count of tootles is then publicly posted, with rewards being provided to the entire class once a predetermined number of tootles have been submitted. The intervention was implemented during one class period each day, which usually lasted 20–30 minutes for two of the classrooms and 60 minutes for one of the classrooms. The intervention was implemented over the course of 10–12 intervention sessions.	Student Behavior: 1.35

Recommendation 7: Use behavior ratings to provide feedback to students			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Murphy et al. (2020) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: The study involves three K–6 classrooms with a total of 22 students. • 68% of the students were male. • 68% of the students were Black, and 9% were White. • All students received special education services. Setting: Separate classrooms in an urban, nonpublic alternative education agency in the Midwestern United States.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. In this study, the Good Behavior Game was implemented daily over the course of 18 intervention sessions. Each Good Behavior Game session lasted 45 minutes.	Student Behavior: **0.63**
Stremel et al. (2022) *Meets WWC standards without reservations*	Design: Single-case design Contrast: Positive peer reporting vs. business as usual Participants: The study included three classrooms with a total of 20 students. Of the 20 students included in the study 19 were in grades 2–5, and 1 student was in grade 6. • 85% of the students were male. • 45% of the students were White, and 55% were Black. • All students received special education services and qualified as having an emotional or behavioral disorder. Setting: Three separate classrooms in an alternative school setting serving students identified with emotional or behavior disorders in the Midwestern United States.	Positive peer reporting (PPR) is a peer-mediated intervention designed to improve social relationships between children, using rewards and positive social attention. The intervention was implemented over the course of 11–13 intervention sessions that each lasted 45 minutes.	Student Behavior: **0.93**

Recommendation 7: Use behavior ratings to provide feedback to students			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Tanol et al. (2010) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Good Behavior Game vs. business as usual Participants: The four focal students in the study attended kindergarten. • All four students were male and Native American. • One of the students received special education services. • All four students were identified by the teacher as engaging in disruptive behavior and at risk for having emotional or behavioral disorders. Setting: Two kindergarten classrooms in an urban public school focused on Native American culture and language.	The Good Behavior Game (GBG) is a group contingency strategy where students are placed into teams and are rewarded for demonstrating appropriate behaviors and not violating classroom rules. The intervention was implemented daily over the course of 8 weeks (40 sessions) and took place for 10 minutes during morning meetings.	Student Behavior: **2.47**
Vogelgesang et al. (2016) *Meets WWC standards with reservations*	Design: Single-case design Contrast: Self-monitoring vs. business as usual Participants: The three focal students in the study attended grade 5. • Two students were female, and one student was male. • All three students were White. • One student had an ADHD diagnosis, and two students were at risk for ADHD. Setting: A general education classroom in an elementary school located in the Midwestern United States.	Self-monitoring is a strategy in which students are taught to be aware of a specific behavior, evaluate in their minds the extent to which they engage in the behavior during a specific time period, and then record whether they engaged in the behavior. The intervention was implemented over the course of 6 intervention sessions. Each session ranged from 45 to 60 minutes.	Student Behavior: **4.06**

Recommendation 7: Use behavior ratings to provide feedback to students			
Study and WWC rating	**Study description**	**Intervention condition description**	**Outcome domain and WWC-calculated effect size[a]**
Williams et al. (2012) *Meets WWC standards without reservations*	Design: Randomized controlled trial Contrast: Direct Behavior Rating vs. business as usual Participants: The study sample consisted of 46 students attending grades 1–5. • 80% of the students were male. • 87% of the students were White, and 13% were Black. • All students were identified by their teacher as exhibiting behavioral concerns. Setting: Two K–5 elementary schools, one public and one private, in the Southeastern and Midwestern United States.	Direct Behavior Rating (DBR) is a rating-scale and point-based feedback form that reflects the student's performance on specific behavioral goals. In this study, DBR involved parents and teachers working together to alleviate students' classroom problems. Teachers evaluated and reported on students' daily behavioral performance, and parents were then responsible for delivering consequences based on that performance. In this study, two variants of emailed DBR were implemented: DBR only and DBR plus performance feedback (based on the quality of the DBR). The interventions were implemented daily over the course of 3 weeks.	Student Behavior: **0.81**

Note: Race/ethnicity categories under the Participants heading in each row may not add to 100 percent due to rounding and/or non–mutually exclusive categories of race/ethnicity; some studies did not report this information.

[a] Statistically significant findings are bolded.

Supplemental findings for Recommendation 7

Supplemental findings (interpersonal competencies and teacher practice outcome measures) for three studies are available at the corresponding study page on the WWC website:

- Ialongo et al. (2019) [***Good Behavior Game* vs. business as usual**].
- Lynne et al. (2017) [***Good Behavior Game* vs. business as usual**].
- Williams et al. (2012) [***Direct Behavior Rating* vs. business as usual**].

Appendix D: Meta-analytic data

Table D.1 provides domain-level data for each recommendation. Specifically, the table provides the total number of studies (*k*) contributing to the meta-analysis, as well as the domain-level meta-analytic effect size (*g*), standard error, and *p*-value.

Table D.1. Domain-level effect size data across studies supporting each recommendation

Outcome domain	Number of studies (*k*)	Effect size (*g*)[a]	Standard error	*p*-Value
Recommendation 1				
Student behavior	14	**0.93**	0.06	< .01
Recommendation 2				
Student behavior	13	**0.94**	0.06	< .01
Recommendation 3				
Student behavior	16	**0.94**	0.06	< .01
Recommendation 4				
Student behavior	3	**0.73**	0.12	< .01
Recommendation 5				
Student behavior	2	**9.54**	1.15	< .01
Recommendation 6				
Student behavior	3	**2.04**	0.29	< .01
Recommendation 7				
Student behavior	12	**0.89**	0.07	< .01

k is the number of studies with at least one outcome in the relevant domain that contributed to the meta-analytic effect size. *g* is Hedges' *g*.

Note: The effect size was calculated using a fixed-effects meta-analytic effect size across studies.

[a] Statistically significant findings are bolded.

Tables **D.2**, **D.3**, **D.4**, **D.5**, **D.6**, **D.7**, and **D.8** provide the underlying data for conducting the fixed-effects meta-analyses for Recommendations 1-7. Each table includes the average effect size, standard error, and inverse variance weight for each outcome domain and study. If a study had multiple main findings contributing to the evidence in the same outcome domain, the average effect size was used. Additional data on the findings and studies reviewed for this practice guide can be extracted from **https://ies.ed.gov/ncee/wwc/studyfindings** when selecting "Systematic Review Protocol for Behavioral Interventions in Grades K-12" in the Protocol field. The WWC webpages for each study also contain additional information about the study and findings (see **References**).

For each finding, the WWC may use either the effect size reported in the study, if it was calculated in a way that is consistent with the WWC Handbooks, or an effect size calculated by the WWC. For additional information on this process, see Appendix E of the *WWC Procedures Handbook, Version 4.1.*

Table D.2. Data for studies providing evidence for Recommendation 1

Study	Outcome domain	Effect size (*g*)	Standard error	Inverse variance weight
Dadakhodjaeva et al. (2019)	Student behavior	1.38	0.30	10.79
Dillon et al. (2019)	Student behavior	1.21	0.23	18.34
Fabiano et al. (2017)	Student behavior	0.68	0.26	14.75
Hoff & Ervin (2013)	Student behavior	1.17	0.35	8.17
Ialongo et al. (2019)	Student behavior	-0.06	0.22	21.04
Lynne et al. (2017)	Student behavior	0.73	0.14	49.09
McHugh et al. (2016)	Student behavior	1.35	0.59	2.92
Murphy et al. (2020)	Student behavior	0.63	0.15	46.13
Radley et al. (2016)	Student behavior	1.13	0.18	30.95
Rafferty et al. (2011)	Student behavior	3.77	1.02	0.96
Stremel et al. (2022)	Student behavior	0.93	0.22	19.81
Tanol et al. (2010)	Student behavior	2.47	0.28	12.43
Vogelgesang et al. (2016)	Student behavior	4.06	0.61	2.70
Williams et al. (2012)	Student behavior	0.81	0.33	9.42

Table D.3. Data for studies providing evidence for Recommendation 2

Study	Outcome domain	Effect size (*g*)	Standard error	Inverse variance weight
Dadakhodjaeva et al. (2019)	Student behavior	1.38	0.30	10.79
Dillon et al. (2019)	Student behavior	1.21	0.23	18.34
Fabiano et al. (2017)	Student behavior	0.68	0.26	14.75
Hoff & Ervin (2013)	Student behavior	1.17	0.35	8.17
Ialongo et al. (2019)	Student behavior	-0.06	0.22	21.04
Lynne et al. (2017)	Student behavior	0.73	0.14	49.09
McHugh et al. (2016)	Student behavior	1.35	0.59	2.92
Murphy et al. (2020)	Student behavior	0.63	0.15	46.13
Radley et al. (2016)	Student behavior	1.13	0.18	30.95
Rafferty et al. (2011)	Student behavior	3.77	1.02	0.96
Stremel et al. (2022)	Student behavior	0.93	0.22	19.81
Tanol et al. (2010)	Student behavior	2.47	0.28	12.43
Vogelgesang et al. (2016)	Student behavior	4.06	0.61	2.70

Table D.4. Data for studies providing evidence for Recommendation 3

Study	Outcome domain	Effect size (*g*)	Standard error	Inverse variance weight
Dadakhodjaeva et al. (2019)	Student behavior	1.38	0.30	10.79
Dillon et al. (2019)	Student behavior	1.21	0.23	18.34
Fabiano et al. (2017)	Student behavior	0.68	0.26	14.75
Hoff & Ervin (2013)	Student behavior	1.17	0.35	8.17
Ialongo et al. (2019)	Student behavior	-0.06	0.22	21.04
Lynne et al. (2017)	Student behavior	0.73	0.14	49.09
Markelz et al. (2019)	Student behavior	2.66	0.42	5.80
McHugh et al. (2016)	Student behavior	1.35	0.59	2.92
Murphy et al. (2020)	Student behavior	0.63	0.15	46.13
O'Handley et al. (2018)	Student behavior	0.77	0.24	17.49
Radley et al. (2016)	Student behavior	1.13	0.18	30.95
Rivera et al. (2015)	Student behavior	0.85	0.23	18.42
Stremel et al. (2022)	Student behavior	0.93	0.22	19.81
Tanol et al. (2010)	Student behavior	2.47	0.28	12.43
Vogelgesang et al. (2016)	Student behavior	4.06	0.61	2.70
Williams et al. (2012)	Student behavior	0.81	0.33	9.42

Table D.5. Data for studies providing evidence for Recommendation 4

Study	Outcome domain	Effect size (*g*)	Standard error	Inverse variance weight
Ennis et al. (2018)	Student behavior	0.50	0.18	32.16
Ennis et al. (2020)	Student behavior	0.78	0.26	15.03
Ennis et al. (2021)	Student behavior	1.00	0.20	24.66

Table D.6. Data for studies providing evidence for Recommendation 5

Study	Outcome domain	Effect size (*g*)	Standard error	Inverse variance weight
Clarke et al. (2016)	Student behavior	33.39	2.50	0.16
Munro & Stephenson (2009)	Student behavior	3.20	1.29	0.60

Table D.7. Data for studies providing evidence for Recommendation 6

Study	Outcome domain	Effect size (*g*)	Standard error	Inverse variance weight
Hoff & Ervin (2013)	Student behavior	1.17	0.35	8.17
Rafferty et al. (2011)	Student behavior	3.77	1.02	0.96
Vogelgesang et al. (2016)	Student behavior	4.06	0.61	2.70

Table D.8. Data for studies providing evidence for Recommendation 7

Study	Outcome domain	Effect size (*g*)	Standard error	Inverse variance weight
Dadakhodjaeva et al. (2019)	Student behavior	1.38	0.30	10.79
Dillon et al. (2019)	Student behavior	1.21	0.23	18.34
Fabiano et al. (2017)	Student behavior	0.68	0.26	14.75
Hoff & Ervin (2013)	Student behavior	1.17	0.35	8.17
Ialongo et al. (2019)	Student behavior	-0.06	0.22	21.04
Lynne et al. (2017)	Student behavior	0.73	0.14	49.09
McHugh et al. (2016)	Student behavior	1.35	0.59	2.92
Murphy et al. (2020)	Student behavior	0.63	0.15	46.13
Stremel et al. (2022)	Student behavior	0.93	0.22	19.81
Tanol et al. (2010)	Student behavior	2.47	0.28	12.43
Vogelgesang et al. (2016)	Student behavior	4.06	0.61	2.70
Williams et al. (2012)	Student behavior	0.81	0.33	9.42

Appendix E: About the panel and WWC contractor staff

Panel

Kathleen Lynne Lane, PhD, BCBA-D, CF-L2 (Panel Chair), is a Roy A. Roberts Distinguished Professor in the Department of Special Education at the University of Kansas and Associate Vice Chancellor for Research. Dr. Lane's research interests focus on designing, implementing, and evaluating Comprehensive, Integrated, Three-tiered (Ci3T) models of prevention to (a) prevent the development of learning, behavior, and social and emotional well-being challenges and (b) respond to existing instances, with an emphasis on systematic screening. She is the co-Editor of *Remedial and Special Education* and Principal Investigator on the following grants funded by the Institute of Education Sciences: Project ENHANCE (Network), Project SCREEN (Measurement), and Project Engage (Pandemic Impact). Dr. Lane has coauthored or edited 15 books and published 246 refereed journal articles and 56 book chapters.

Tabathia Baldy, EdD, is the Program Manager for Mental Health & Well-being for the Georgia Department of Education within the Office of Whole Child Supports. Prior to this role, Dr. Baldy served as the Director for Multi-Tiered Systems of Support (MTSS) and Positive Behavioral Interventions and Supports (PBIS) for a school district in rural Georgia; as a special education director in urban North Carolina; and in various district leadership roles related to MTSS/PBIS, special education, and mental health in Florida. She began her career as a special education teacher serving students with significant emotional/behavioral disorders in Georgia and Florida and has also served as an assistant principal. She has an EdD in leadership and MEd in emotional/behavioral disorders with a reading endorsement. She is currently the Principal Investigator for a U.S. Department of Health and Human Services grant focused on effective school-based mental health practices within a tiered system of supports and previously served as a district point of contact for a randomized controlled trial to develop and test interventions to reduce racial disproportionality in school discipline. In addition to ensuring students' emotional and behavioral needs are met, Dr. Baldy has an interest in and advocates for high-quality research-based literacy instruction and equitable outcomes for all students.

Tammy Becker, MEd, is a retired principal with 31 years of experience in both rural and urban communities. She primarily worked in low socioeconomic status schools with Title I and English as a Second Language programming, as well as some specialized classrooms for students with high special education needs. She was the Principal of a 2018 National Blue Ribbon school that was recognized for closing achievement gaps among subgroups. For seven years, Ms. Becker oversaw the implementation of the Ci3T (Comprehensive, Integrated, Three-Tiered) Model of Prevention. She now serves as a coach to schools across the United States implementing Ci3T through an IES-funded evaluation of Project ENHANCE. Ms. Becker has an MEd in educational administration.

Catherine Bradshaw, PhD, is Professor and Senior Associate Dean for Research and Faculty Development at the School of Education and Human Development at the University of Virginia. She has a PhD in developmental psychology and an MEd in counseling and guidance.

Dr. Bradshaw's primary research interests focus on the development of aggressive behavior and school-based prevention. Her research includes examining bullying and school climate; the development of aggressive and problem behaviors; effects of exposure to violence, peer victimization, and environmental stress on children; children with emotional and behavioral disorders and autism; and the design, evaluation, and implementation of evidence-based prevention programs in schools, including Positive Behavioral Interventions and Supports and social-emotional learning. Dr. Bradshaw works with several states and school districts to support the development and implementation of programs and policies to prevent bullying and school violence and to foster safe and supportive learning environments. She is the co-Director of the IES-funded National Center for Rural School Mental Health and the Principal Investigator of an IES-funded grant to evaluate a tiered approach to increasing behavioral and mental health supports and reducing disparities. Dr. Bradshaw was the Panel Chair for 2M Research's recent review of evidence *Promoting Social and Behavioral Success for Learning in Elementary Schools* (2022).

Virginia (Ginny) Dolan, EdD, is a practicing psychologist and a retiree of Anne Arundel County Public Schools (MD), where she served as the Coordinator of Behavioral Supports and Interventions and as a Positive Behavioral Interventions and Supports Facilitator. She has more than 40 years of experience in the field of education and mental health, including experience as a middle school teacher, special education teacher, school psychologist, and supervisor for psychological services. Dr. Dolan has an EdD in counseling and a MS in counseling psychology. She served on the PBIS Maryland State Leadership Team, for which she served on multiple state and district committees focusing on equity including special education with placement and student suspension, student discipline policies, and best practices for district/school implementation of Multi-Tiered Systems of Support. Dr. Dolan served as the Acting Coordinator of Psychological Services and is a former president of the Maryland School Psychology Association. She is currently a practicing psychologist specializing in anxiety, depression, and mood disorders with children and adolescents. Dr. Dolan was a member of the expert panel for 2M Research's recent review of evidence *Promoting Social and Behavioral Success for Learning in Elementary Schools* (2022).

Kent McIntosh, PhD, is the Philip H. Knight Chair of Special Education in the College of Education at the University of Oregon. He is also the Director of Educational and Community Supports, a research unit in the College of Education. Dr. McIntosh has research experience in school violence prevention, alternatives to exclusionary school discipline, and racial disparities in school discipline. He has a PhD in school psychology and an MS in special education. His research examines how effective school and classroom behavior support practices can be implemented to enhance their effectiveness, efficiency, equity, and durability. Dr. McIntosh is the Principal Investigator of multiple IES projects, including efficacy trials testing interventions to reduce racial disproportionality in school discipline, increase high school completion, and support high school student behavior in the classroom. He is co-Director of the U.S. Department of Education/Office of Special Education Programs' (OSEP) National Technical Assistance Center on Positive Behavioral Interventions and Supports. In addition, he is a founding member of PBIS-SCP Canada, a national network supporting PBIS implementation and research in Canada.

Rhonda Nese, PhD, is an Associate Professor of Special Education in the College of Education at the University of Oregon and an Affiliate Faculty in Prevention Science. She is also a Principal Investigator within Educational and Community Supports, a research unit in the College of Education. Dr. Nese has a PhD and MEd in school psychology, and her research involves equitable intervention delivery within a multitiered behavior support framework focused on preventative strategies for improving student outcomes. She currently serves as the Director of an IES grant to refine and test an intervention to reduce exclusionary discipline practices, improve student behavior and student-teacher relationships, and increase instructional time for students in secondary settings and a co-Principal Investigator on three additional IES grants, including one to identify factors that predict implementation and sustainability of evidence-based practices. Dr. Nese also provides technical assistance to state, district-, and school -level teams across the nation on preventative practices, including addressing implicit bias in school discipline, effective classroom behavior management strategies, bullying prevention, and alternatives to exclusionary discipline practices through the OSEP National Technical Assistance Center on Positive Behavioral Interventions and Supports.

Ruthie Payno-Simmons, PhD, is the founder of RPS Educational Impact and serves as the Associate Director of the Midwest and Plains Equity Assistance Center (MAP Center). In this role, she oversees the coordination, design, and delivery of equity-focused professional learning and technical assistance (TA) to state and local agencies throughout the MAP Center's 13-state region. Dr. Payno-Simmons also serves as an implementation partner with the OSEP National Technical Assistance Center on Positive Behavioral Interventions and Supports, contributing to centering equity in school behavior systems and centering equity in TA provision. Towards this end, Dr. Payno-Simmons participates on various panels, committees, and workgroups that produce evidence-based guides and implementation tools and processes for school practitioners. Through RPS Educational Impact, Dr. Payno-Simmons collaborates nationally with TA centers and state/local education agencies, extending her expertise to support equity-focused policies, practices, systems, and strategic plans. To her current role Dr. Payno-Simmons brings 25 years of valuable experience, which spans positions as a building principal, district administrator, and national TA provider. Her leadership journey encompasses a broad range of responsibilities, including coordinating TA provision, K–12 education programs, and curriculum development; facilitating staff professional development; leading school improvement initiatives; managing district accreditation processes; and evaluating various systems, assessments, and processes.

Kevin Sutherland, PhD, is a Professor of Counseling and Special Education in the School of Education and Research Faculty at the Clark-Hill Institute for Positive Youth Development at Virginia Commonwealth University. A former teacher of youth with intensive behavioral and learning needs in both residential and public school settings, Dr. Sutherland's research interests and expertise include efforts to enhance the use and fidelity of implementation of evidence-informed programs targeting reductions in unwanted problem behavior in school and community settings, community -engaged research, and sustainment of evidence-informed practices in school settings. He has a PhD and MEd in special education. Dr. Sutherland has been a Principal Investigator or co-Principal Investigator on federally funded projects that involve the development and evaluation of evidence-informed programs in schools, including BEST in CLASS (a Tier 2 intervention) and has created assessment tools to

examine teachers' fidelity to and adequacy of implementing these programs in classrooms. Dr. Sutherland was a member of the expert panel for 2M Research's recent review of evidence *Promoting Social and Behavioral Success for Learning in Elementary Schools* (2022).

WWC Contractor Staff

Allison Dymnicki, PhD, is an Abt Principal Associate with more than 18 years of background conducting meta-analyses and systematic reviews and summarizing evidence to develop products and tools to help practitioners use evidence in daily practice. She is an author of the seminal meta-analyses establishing the evidence base for social-emotional learning; has conducted reviews of school-based violence prevention programs, service learning programs, evidence-based programs in human and health settings; and has served as a co-Principal Investigator of a $4-million replication grant designed to train elementary school staff to deliver Conjoint Behavioral Consultation in 80 elementary schools. Dr. Dymnicki is certified in the WWC group design standards. Dr. Dymnicki received her MA and PhD in Community Psychology and Prevention Research from the University of Illinois at Chicago.

Brian Freeman, EdM, is an Abt Senior Associate with 11 years of experience with education evaluation and systematic evidence reviews. He serves as Project Director on the WWC-PESTO Task Order 01 and Task Order 04 contracts. He previously served as co-Methodological Lead, Intervention Report Director, and Review Team Lead on the WWC-PEPPER contract. In these roles he has trained and overseen a large team of WWC-certified reviewers. He has reconciled WWC study reviews, adjudicating differences between reviewers and ensuring consistency of the final review with WWC standards and guidance. He has also guided reviewers in applying the WWC standards to complicated cases. He has significant experience with project and task management and descriptive and statistical analysis for large-scale public sector studies. He has conducted meta-analyses for several systematic evidence reviews, including three WWC practice guides. Mr. Freeman received his EdM at the Harvard Graduate School of Education.

Laura Holian, PhD, is the Research Director at AnLar, LLC. She directs projects and evaluations funded by the National Center for Education Statistics, the Office of Elementary and Secondary Education, the Institute of Education Science, and the National Science Foundation. Her research interests include teacher training, school counselors, STEM education, and secondary-to-postsecondary transitions. She was certified as a What Works Clearinghouse reviewer in group design studies in 2010 and is certified in WWC 4.1 group design standards. She earned her PhD in Sociology at the University of Virginia, where she also completed an IES Doctoral Training Program in Education Science.

Sebastian Lemire, PhD, Practice Guide Director, is an Abt Senior Associate with expertise in all aspects of evidence reviews from initial framing and design to implementation and dissemination. For WWC-PEPPER and WWC-PESTO, Dr. Lemire has developed topic area review protocols and search strategies; conducted screenings, study reviews, and reconciliations; prepared and co-facilitated panel meetings; and co-authored two practice guides on career pathways and effective advising. He is certified in the WWC group design standards, advanced group design standards, and single-case design standards (versions 4.1-5.0). In addition to his work for the WWC, he has conducted study reviews and provided technical assistance to evidence reviews for the Prevention Services Clearinghouse, the

Investing in Innovation (i3) National Evaluation, the ASPE Effectiveness Factors project, the Career Pathways Evidence Review, and the Clearinghouse for Labor Evaluation and Research, among others. As an award-winning author, he has published more than 50 peer-reviewed articles, book chapters, and method guides. He received his MSc at the London School of Economics and his PhD at the University of California, Los Angeles.

Shawn Moulton, PhD, is a Senior Scientist at Abt Global with expertise in quantitative evaluation methods and substantive expertise in education, housing, and workforce policies and programs. Dr. Moulton's background includes designing and directing experimental and quasi-experimental evaluations of social programs. He is a WWC-certified reviewer and has extensive experience providing technical assistance on evaluation plans and analyses. Dr. Moulton currently serves as the Director of Analysis for HUD's First Time Homebuyer Education and Counseling Demonstration, which evaluates the effectiveness of homebuyer education and counseling using a multisite randomized experimental design. For WWC-PEPPER and WWC-PESTO, Dr. Moulton conducted systematic literature searches and evidence reviews and developed review products that expand the content available from WWC in various topic areas related to postsecondary education and assisting students struggling with behavior. Dr. Moulton received his PhD in Economics from the University of Notre Dame.

Allan Porowski, MPA, Lead Methodologist, has served the What Works Clearinghouse continuously since 2003. He advises reviewers on the application of WWC standards, reconciles studies, and helps guide the scoping and development of practice guides. Mr. Porowski also served as co-Lead Methodologist of the literacy reviews for WWC-OREGANO. He served as a member of the STAT team, where he contributed to the development of the Version WWC 5.0 Standards through his work on the baseline equivalence and study definition working groups. Mr. Porowski also served as Lead Methodologist for the WWC-PEPPER contract, where he contributed to the development of three practice guides and 15 intervention reports. Mr. Porowski is certified in the latest version of group design standards, advanced design standards, and single-case design standards.

Acknowledgments

The panel would like to thank the team of WWC-certified reviewers from Abt, Analytica, AnLar, and RAND for their contributions to this practice guide. They would also like to thank the following staff from Abt: Kaitlyn Ciaffone for coordinating and managing study reviews and managing the project; and Alyssa Brocker, Nam Hà, and Ashleigh Hawthorne for assisting with coding studies.

Appendix F: Disclosure of potential conflicts of interest

Practice guide panels comprise nationally recognized experts on the topics about which they are making recommendations. The Institute of Education Sciences (IES) expects the experts to be involved in professional activities that might relate to their work as a panelist. Panel members are asked to disclose these professional activities and institute deliberative processes that encourage critical examination of their views as they relate to the content of the practice guide. Objectivity is further encouraged by the requirement that the panelists ground their recommendations in evidence that is documented in the practice guide. In addition, before all practice guides are published, the guides undergo an independent external peer review focusing on whether the evidence related to the recommendations in the guide has been presented appropriately. The professional activities reported by each panel that appear to be most closely associated with the panel recommendations are noted below.

Panelists

Catherine Bradshaw co-authored publications referenced in this practice guide.

Virginia Dolan co-authored a publication referenced in this practice guide.

Kathleen L. Lane co-authored publications that were reviewed and used as evidence for this practice guide. She has also co-authored publications referenced in this practice guide.

Kevin Sutherland co-authored publications referenced in this practice guide.

References

Studies included in the meta-analysis

These studies meet WWC standards and provide the evidence base for the recommendations. References include hyperlinks to the URL for the full-text article in the Education Resources Information Center (ERIC). For references not included in ERIC, hyperlinks to full-text articles with the publisher are provided. Hyperlinks to the What Works Clearinghouse study review are provided in brackets.

Clarke, L. S., Haydon, T., Bauer, A., & Epperly, A. C. (2016). Inclusion of students with an intellectual disability in the general education classroom with the use of response cards. *Preventing School Failure: Alternative Education for Children and Youth, 60*(1), 35–42. **https://eric.ed.gov/?id=EJ1082670** [***Response cards vs. business as usual***].

Dadakhodjaeva, K., Radley, K. C., Tingstrom, D. H., Dufrene, B. A., & Dart, E. H. (2019). Effects of daily and reduced frequency implementation of the Good Behavior Game in kindergarten classrooms. *Behavior Modification, 44*(4), 471–495. **https://journals.sagepub.com/doi/abs/10.1177/0145445519826528?journalCode=bmoa** [***Good Behavior Game vs. business as usual***]

Dillon, M. B. M. H., Radley, K. C., Tingstrom, D. H., Dart, E. H., & Barry, C. T. (2019). The effects of Tootling via ClassDojo on student behavior in elementary classrooms. *School Psychology Review, 48*(1), 18–30. **https://eric.ed.gov/?id=EJ1210718** [***Tootling vs. business as usual***]

Ennis, R. P., Lane, K. L., & Flemming, S. C. (2021). Empowering teachers with low-intensity strategies: Supporting students at-risk for EBD with Instructional Choice during reading. *Exceptionality, 29*(1), 61–79. **https://eric.ed.gov/?id=EJ1296132** [***Instructional choice vs. business as usual***]

Ennis, R. P., Lane, K. L., & Oakes, W. P. (2018). Empowering teachers with low-intensity strategies to support instruction: Within-activity choices in third-grade math with null effects. *Remedial and Special Education, 39*(2), 77–94. **https://eric.ed.gov/?id=EJ1173893** [***Instructional choice vs. business as usual***]

Ennis, R. P., Lane, K. L., Oakes, W. P., & Flemming, S. C. (2020). Empowering teachers with low-intensity strategies to support instruction: Implementing across-activity choices during third-grade reading instruction. *Journal of Positive Behavior Interventions, 22*(2), 78–92. **https://eric.ed.gov/?id=EJ1244466** [***Instructional choice vs. business as usual***]

Fabiano, G. A., Pyle, K., Kelty, M. B., & Parham, B. R. (2017). Progress monitoring using Direct Behavior Rating single item scales in a multiple-baseline design study of the daily report card intervention. *Assessment for Effective Intervention, 43*(1), 21–33. **https://eric.ed.gov/?id=EJ1160518** [***Direct Behavior Rating vs. business as usual***]

Hoff, K. E., & Ervin, R. A. (2013). Extending self-management strategies: The use of a classwide approach. *Psychology in the Schools, 50*(2), 151-164. **https://eric.ed.gov/?id=EJ1009891** [***Self-management vs. business as usual***]

Ialongo, N. S., Domitrovich, C., Embry, D., Greenberg, M., Lawson, A., Becker, K. D., & Bradshaw, C. (2019). A randomized controlled trial of the combination of two school-based universal preventive interventions. *Developmental Psychology, 55*(6), 1313-1325. **https://eric.ed.gov/?id=EJ1216803** [***Good Behavior Game vs. business as usual***]

Lynne, S., Radley, K. C., Dart, E. H., Tingstrom, D. H., Barry, C. T., & Lum, J. D. K. (2017). Use of a technology-enhanced version of the Good Behavior Game in an elementary school setting. *Psychology in the Schools, 54*(9), 1049-1063. **https://eric.ed.gov/?id=EJ1156664** [***Good Behavior Game vs. business as usual***]

Markelz, A. M., Taylor, J. C., Kitchen, T., Riccomini, P. J., Catherine Scheeler, M., & McNaughton, D. B. (2019). Effects of tactile prompting and self-monitoring on teachers' use of Behavior-Specific Praise. *Exceptional Children, 85*(4), 471-489. **https://eric.ed.gov/?id=EJ1219129** [***Behavior-Specific Praise vs. business as usual***]

McHugh, M. B., Tingstrom, D. H., Radley, K. C., Barry, C. T., & Walker, K. M. (2016). Effects of Tootling on classwide and individual disruptive and academically engaged behavior of lower-elementary students. *Behavioral Interventions, 31*(4), 332-354. **https://onlinelibrary.wiley.com/doi/abs/10.1002/bin.1447** [***Tootling vs. business as usual***]

Munro, D. W., & Stephenson, J. (2009). The effects of Response Cards on student and teacher behavior during vocabulary instruction. *Journal of Applied Behavior Analysis, 42*(4), 795-800. **https://eric.ed.gov/?id=EJ868588** [***Response cards vs. business as usual***]

Murphy, J. M., Hawkins, R. O., & Nabors, L. (2020). Combining social skills instruction and the Good Behavior Game to support students with emotional and behavioral disorders. *Contemporary School Psychology, 24*(2), 228-238. **https://eric.ed.gov/?id=EJ1251543** [***Good Behavior Game vs. business as usual***]

O'Handley, R. D., Dufrene, B. A., & Whipple, H. (2018). Tactile prompting and weekly performance feedback for increasing teachers' behavior-specific praise. *Journal of Behavioral Education, 27*(3), 324-342. **https://eric.ed.gov/?id=EJ1187557** [***Behavior-Specific Praise vs. business as usual***]

Radley, K. C., Dart, E. H., & O'Handley, R. D. (2016). The Quiet Classroom Game: A class-wide intervention to increase academic engagement and reduce disruptive behavior. *School Psychology Review, 45*(1), 93-108. **https://eric.ed.gov/?id=EJ1141303** [***The Quiet Classroom Game vs. business as usual***]

Rafferty, L., Arroyo, J., Ginnane, S., & Wilczynski, K. (2011). Self-monitoring during spelling practice: Effects on spelling accuracy and on-task behavior of three students diagnosed with attention deficit hyperactivity disorder. *Behavior Analysis in Practice, 4*(1), 37-45. **https://link.springer.com/article/10.1007/BF03391773** [***Self-monitoring vs. business as usual***]

Rivera, C. J., Mason, L. L., Jabeen, I., & Johnson, J. (2015). Increasing teacher praise and on task behavior for students with autism using mobile technology. *Journal of Special Education Technology, 30*(2), 101-111. **https://journals.sagepub.com/doi/abs/10.1177/0162643415617375** [***Behavior-contingent praise vs. business as usual***]

Stremel, J. M., Hawkins, R. O., Collins, T. A., & Nabors, L. (2022). Positive behavior change: Effects of an intervention package for disruptive behavior in a specialized school setting. *Psychology in the Schools, 59*(3), 607-627. **https://eric.ed.gov/?id=EJ1325774** [***Positive peer reporting vs. business as usual***]

Tanol, G., Johnson, L., McComas, J., & Cote, E. (2010). Responding to rule violations or rule following: A comparison of two versions of the Good Behavior Game with kindergarten students. *Journal of School Psychology, 48*(5), 337-355. **https://eric.ed.gov/?id=EJ895127** [***Good Behavior Game vs. business as usual***]

Vogelgesang, K. L., Bruhn, A. L., Coghill-Behrends, W. L., Kern, A. M., & Troughton, L. C. W. (2016). A single-subject study of a technology-based self-monitoring intervention. *Journal of Behavioral Education, 25*(4), 478-497. **https://eric.ed.gov/?id=EJ1120160** [***Self-monitoring vs. business as usual***]

Williams, K. L., Noell, G. H., Jones, B. A., & Gansle, K. A. (2012). Modifying students' classroom behaviors using an electronic Daily Behavior Report Card. *Child & Family Behavior Therapy, 34*(4), 269-289. **https://eric.ed.gov/?id=EJ984745** [***Direct Behavior Rating vs. business as usual***]

Studies that did not meet WWC standards

These studies were reviewed for this practice guide but did not meet WWC standards. Therefore, these studies do not contribute to the evidence base for the recommendations. References include the URL for the full-text article in the ERIC, with hyperlinks to the WWC study review in brackets.

Conradi, L. A., Jameson, J. M., Fischer, A. J., Farrell, M., Eichelberger, C., Ryan, J., Bowman, J. A., Fudge, O., & McDonnell, J. (2020). Effects of the Good Behavior Game on students with severe disabilities. *Education and Training in Autism and Developmental Disabilities, 56*(4), 454-465. **https://eric.ed.gov/?id=EJ1316046** [***Good Behavior Game vs. business as usual***]

Ramirez, L. H., Hawkins, R. O., Collins, T. A., Ritter, C., & Haydon, T. (2019). Generalizing the effects of group contingencies across instructional settings for students with emotional and behavioral disorders. *School Psychology Review, 48*(1), 98-112. **https://eric.ed.gov/?id=EJ1210646** [***Generalization Strategies/Reinforcement vs. business as usual***]

Additional sources cited

These sources provide other information relevant to the practice guide topic, recommendations, and implementation of the recommended practices. Citations include hyperlinks to the full-text article.

References

Aidman, B., & Long, T. A. (2017). Leadership and storytelling: Promoting a culture of learning, positive change, and community. *Leadership and Research in Education, 4*(1), 106–126. **https://eric.ed.gov/?id=EJ1160822**

Algozzine, B., Browder, D., Karvonen, M., Test, D. W., & Wood, W. M. (2001). Effects of interventions to promote self-determination for individuals with disabilities. *Review of Educational Research, 71*(2), 219–277. **https://journals.sagepub.com/doi/10.3102/00346543071002219**

Algozzine, K., & Algozzine, B. (2007). Classroom instructional ecology and school-wide positive behavior support. *Journal of Applied School Psychology, 24*(1), 29–47. **https://psycnet.apa.org/record/2007-15045-003**

Anderson, C.M. & Rodriguez, B.J. (n.d.) The Good Behavior Game: Implementation & Procedures Workbook. **https://www.pbiscaltac.org/resources/CV19%20Supporting%20Teachers%20Students%20Families/The%20Good%20Behavior%20Game.pdf**

Banks, T., & Obiakor, F. E. (2015). Culturally responsive positive behavior supports: Considerations for practice. *Journal of Education and Training Studies, 3*(2), 83–90. **https://files.eric.ed.gov/fulltext/EJ1054945.pdf**

Beaman, R., & Wheldall, K. (2000). Teachers' use of approval and disapproval in the classroom. *Educational Psychology, 20*(4), 431–446. **https://www.tandfonline.com/doi/abs/10.1080/713663753**

Burden, P. (2006). *Classroom management: Creating a successful K-12 learning community* (2nd ed.). Wiley.

Center on PBIS. (2022). *Supporting and responding to students' social, emotional, and behavioral needs: Evidence-based practices for educators (Version 2)*. Center on PBIS, University of Oregon. **https://www.pbis.org/**

Chafouleas, S. M., Riley Tillman, T. C., & McDougal, J. L. (2002). Good, bad, or in between: How does the daily behavior report card rate? *Psychology in the Schools, 39*(2), 157–169. **https://psycnet.apa.org/record/2002-12068-003**

Cherng, H. Y. S. (2017). The ties that bind: Teacher relationships, academic expectations, and racial/ethnic and generational inequality. *American Journal of Education, 124*(1), 67–100. **https://www.journals.uchicago.edu/doi/abs/10.1086/693955**

Cihak, D. F., Kirk, E. R., & Boon, R. T. (2009). Effects of classwide positive peer ''Tootling'' to reduce the disruptive classroom behaviors of elementary students with and without disabilities. *Journal of Behavioral Education, 18*(4), 267–278. **https://www.jstor.org/stable/41824466**

Codding, R. S., Feinberg, A. B., Dunn, E. K., & Pace, G. M. (2005). Effects of immediate performance feedback on implementation of behavior support plans. *Journal of Applied Behavior Analysis, 38*(2), 205–219. **https://eric.ed.gov/?id=EJ697210**

References

Codding, R. S., Livanis, A., Pace, G. M., & Vaca, L. (2008). Using performance feedback to improve treatment integrity of classwide behavior plans: An investigation of observer reactivity. *Journal of Applied Behavior Analysis, 41*(3), 417–422. **https://eric.ed.gov/?id=EJ808982**

Common, E. A., & Lane, K. L. (2017). Social validity assessment. In *Applied behavior analysis advanced guidebook* (pp. 73–92). Academic Press.

Common, E. A., Lane, K. L., Cantwell, E. D., Brunsting, N. C., Oakes, W. P., Germer, K. A., & Bross, L. A. (2020). Teacher-delivered strategies to increase students' opportunities to respond: A systematic methodological review. *Behavioral Disorders, 45*(2), 67–84. **https://doi.org/10.1177/0198742919828310**

Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). *Applied behavior analysis*. Pearson.

Croce, K. M., & Salter, J. S. (2022). Beyond the walls: Establishing classroom expectations in virtual classrooms. *Frontiers in Education, 7*. **https://www.frontiersin.org/journals/education/articles/10.3389/feduc.2022.816007/full**

Dibley, S., & Lim, L. (1999). Providing choice making opportunities within and between daily school routines. *Journal of Behavioral Education, 9*, 117–132. **https://link.springer.com/article/10.1023/A:1022888917128**

Gardner, R., Heward, W., & Grossi, T. (1994). Effects of response cards on student participation and academic achievement: A systematic replication with inner-city students during whole-class science instruction. *Journal of Applied Behavior Analysis, 27*, 63–71. **https://pubmed.ncbi.nlm.nih.gov/16795826/**

Hamre, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development, 72*(2), 625–638. **https://www.jstor.org/stable/1132418**

Haydon T., MacSuga-Gage A. S., Simonsen B., & Hawkins R. (2012). Opportunities to respond: A key component of effective instruction. *Beyond Behavior, 22*(1), 23–31. **https://journals.sagepub.com/doi/abs/10.1177/107429561202200105?journalCode=bbxa**

Haydon, T., Marsicano, R., & Scott, T. M. (2013) A comparison of choral and individual responding: A review of the literature. P*reventing School Failure: Alternative Education for Children and Youth, 57*(4), 181–188. **https://www.tandfonline.com/doi/abs/10.1080/1045988X.2012.682184**

Haydon, T., & Musti-Rao, S. (2011). Effective use of behavior-specific praise: A middle school case study. *Beyond Behavior, 20*(2), 31–39. **https://eric.ed.gov/?id=EJ958714**

Hedges, L. V., & Vevea, J. L. (1998). Fixed- and random-effects models in meta-analysis. *Psychological Methods, 3*(4), 486–504. **https://doi.org/10.1037/1082-989X.3.4.486**

Jenkins, L. N., Floress, M. T., & Reinke, W. (2015). Rates and types of teacher praise: A review and future directions. *Psychology in the Schools, 52*(5), 463–476. **https://eric.ed.gov/?id=EJ1057512**

References

Kern, L., & State T. M. (2009). Incorporating choice and preferred activities into classwide instruction. *Beyond Behavior, 18,* 3-11. **https://eric.ed.gov/?id=EJ869679**

Lane, K. S., Buckman, M. M., Iovino, E. A., & Lane, K. L. (2023). Incorporating choice: Empowering teachers and families to support students in varied learning contexts. *Preventing School Failure, 67*(2), 106-114. **https://www.tandfonline.com/doi/full/10.1080/1045988X.2023.2181304?src=**

Lane, K. L., Menzies, H., Bruhn, A., & Crnobori, M. (2011). *Managing challenging behaviors in schools: Research-based strategies that work.* Guilford Press.

Lane, K. L., Menzies, H. M., Ennis, R. P., & Oakes, W. P. (2015). *Supporting behavior for school success: A step-by-step guide to key strategies.* Guilford Press.

Lane, K. L., Oakes, W. P., & Menzies, H. M. (2010). *Schoolwide expectations survey for specific settings.* Available at: **https://www.ci3t.org/measures**

Libby, M. E., Weiss, J. S., Bancroft, S., & Ahearn, W. H. (2008). A comparison of most-to-least and least-to-most prompting on the acquisition of solitary play skills. *Behavior Analysis in Practice, 1*(1), 37-43. **https://doi.org/10.1007/BF03391719**

Longobardi, C., Settanni, M., Lin, S., & Fabris, M. A. (2021). Student-teacher relationship quality and prosocial behaviour: The mediating role of academic achievement and a positive attitude towards school. *British Journal of Educational Psychology, 91*(2), 547-562. **https://pubmed.ncbi.nlm.nih.gov/32920835/**

Maag, J. W. (2004). B*ehavior management: From theoretical implications to practical applications* (2nd. ed.). Wadsworth/Thompson Learning.

Menzies, H. M., Lane, K. L., & Lee, J. M. (2009). Self-monitoring strategies for use in the classroom: A promising practice to support productive behavior for students with emotional or behavioral disorders. *Beyond Behavior, 18,* 27-35. **https://eric.ed.gov/?id=EJ869682**

Messenger, M., Common, E. A., Lane, K. L., Oakes, W. P., Menzies, H. M., Cantwell, E. D., & Ennis, R. P. (2017). Increasing opportunities to respond for students with internalizing behaviors: The utility of choral and mixed responding. *Behavioral Disorders, 42,* 170-184. **https://journals.sagepub.com/doi/abs/10.1177/0198742917712968**

Mrachko, A. A., Kostewicz, D. E., & Martin, W. P. (2017). Increasing positive and decreasing negative teacher responses to student behavior through training and feedback. *Behavior Analysis: Research and Practice, 17*(3), 250. **https://psycnet.apa.org/fulltext/2017-36578-005.html**

Myers, D. M., Simonsen, B., & Sugai, G. (2011). Increasing teachers' use of praise with a response-to-intervention approach. *Education and Treatment of Children, 34*(1), 35-59. **https://eric.ed.gov/?id=EJ907149**

Narayan, J. S., Heward, W. L., Gardner, R. I., Courson, F. H., & Omness, C. K. (1990). Using response cards to increase student participation in an elementary classroom. *Journal of Applied Behavior Analysis, 23,* 483-390. **https://eric.ed.gov/?id=EJ424546**

References

National Professional Development Center on Autism Spectrum Disorders, (n.d.). *Case study example: Least-to-most prompting.* **https://autismpdc.fpg.unc.edu/sites/autismpdc.fpg.unc.edu/files/Prompting-casestudies-LTM.pdf**

Neitzel, J., & Wolery, M. (2009). *Steps for implementation: Least-to-most prompts.* National Professional Development Center on Autism Spectrum Disorders, Frank Porter Graham Child Development Institute, The University of North Carolina. **https://autismpdc.fpg.unc.edu/sites/autismpdc.fpg.unc.edu/files/Prompting_Steps-Least.pdf**

Nisar, H., Elgin, D., Bradshaw, C., Dolan., V., Frey, A., Horner, R., Owens, J., Perales, K., & Sutherland, K. (2022). *Promoting social and behavioral success for learning in elementary schools: Practice recommendations for elementary school Educators, school and district administrators, and parents.* 2M Research Services. **https://eric.ed.gov/?id=ED617775**

Partin, T. C. M., Robertson, R. E., Maggin, D. M., Oliver, R. M., & Wehby, J. H. (2009). Using teacher praise and opportunities to respond to promote appropriate student behavior. *Preventing School Failure: Alternative Education for Children and Youth, 54*(3), 172-178. **https://www.tandfonline.com/doi/abs/10.1080/10459880903493179**

Pérez-Clark, P., Royer, D. J., Austin, K. S., & Lane, K. L. (2023). A Systematic Review of Second Step Social-Emotional Skills Program in Middle Schools. *Remedial and Special Education, 44*(5), 395-408. **https://doi.org/10.1177/07419325221131913**

Positive Behavioral Interventions & Supports. (2020). *The Student/Teacher Game.* Available at: **https://www.pbis.org/resource/the-student-teacher-game**

Randolph, J. (2007). Meta-analysis of the research on response cards: Effects on test achievement, quiz achievement, participation and off-task behavior. *Journal of Positive Behavior Interventions, 9*, 113-128. **https://eric.ed.gov/?id=EJ804308**

Rispoli, M., Lang, R., Neely, L., Camargo, S., Hutchins, N., Davenport, K., & Goodwyn, F. (2013). A comparison of within- and across-activity choices for reducing challenging behavior in children with autism spectrum disorders. *Journal of Behavioral Education, 22*, 66-83. **https://eric.ed.gov/?id=EJ996252**

Rudasill, K. M., Reio, T. G., Stipanovic, N., & Taylor, J. E. (2010). A longitudinal study of student-teacher relationship quality, difficult temperament, and risky behavior from childhood to early adolescence. *Journal of School Psychology 48*(5), 389-412. **https://pubmed.ncbi.nlm.nih.gov/20728689/**

Scott, T. M., Park, K. L., Swain-Bradway, J., & Landers, E. (2007). Positive behavior support in the classroom: Facilitating behaviorally inclusive learning environments. *International Journal of Behavioral Consultation and Therapy, 3*(2), 223. **https://files.eric.ed.gov/fulltext/EJ801199.pdf**

Shapiro, E. S., & Cole, C. L. (1994). *Behavior change in the classroom: Self-management interventions.* Guilford Press.

Sherod, R. L., Jones, J. S., Perry, H., & Oakes, W. P. (2023). Precorrection: Empowering teachers and families to support students in varied learning contexts. *Preventing School Failure: Alternative Education for Children and Youth, 67*(2), 91-97. **https://www.tandfonline.com/doi/full/10.1080/1045988X.2023.2181302**

Shogren, K. A., Faggella-Luby, M. N., Bae, S. J., & Wehmeyer, M. L. (2004). The effect of choice-making as an intervention for problem behavior: A meta-analysis. *Journal of Positive Behavior Interventions 6*(4), 228–237. **https://journals.sagepub.com/doi/abs/10.1177/10983007040060040401**

Solomon, B. G., Klein, S. A., & Politylo, B. C. (2012). The effect of performance feedback on teachers' treatment integrity: A meta-analysis of the single-case literature. *School Psychology Review, 41*(2), 160–175. **https://eric.ed.gov/?id=EJ977432**

Stanton-Salazar, R. D. (2011). A social capital framework for the study of institutional agents and their role in the empowerment of low-status students and youth. *Youth & Society 43*(3), 1066–1109. **https://journals.sagepub.com/doi/10.1177/0044118X10382877**

Stichter, J. P., Lewis, T. J., Whittaker, T. A., Richter, M., Johnson, N. W., & Trussell, R. P. (2009). Assessing Teacher Use of Opportunities to Respond and Effective Classroom Management Strategies: Comparisons Among High- and Low-Risk Elementary Schools. *Journal of Positive Behavior Interventions, 11*(2), 68-81. **https://journals.sagepub.com/doi/10.1177/1098300708326597**

Stormont, M. A., Smith, S. C., & Lewis, T. J. (2007). Teacher implementation of precorrection and praise statements in Head Start classrooms as a component of a program-wide system of positive behavior support. *Journal of Behavioral Education, 16,* 280–290.

Sugai, G., & Horner, R. (2014). The evolution of discipline practices: School-wide positive behavior supports. In *Behavior psychology in the schools* (pp. 23–50). Routledge.

Sutherland, K. S., Wu, E., McLeod, Washington-Nortey, M., McKnight, K., McLeod, B. D., & Conroy, M. A. (2023). Caregiver and teacher perspectives on home-school partnerships within a Tier 2 intervention. *Journal of Emotional and Behavioral Disorders, 31,* 219–232. **https://doi.org/10.1177/10634266221130053**

Swain-Bradway, J., Johnson, J., Eber, L., Barrett, S., & Weist, M. D. (2015). Interconnecting school mental health and school-wide positive behavior support. In S. Kutcher, Y. Wei, & M. D. Weist (Eds.), *School mental health: Global challenges and opportunities* (pp. 282–298). Cambridge University Press. **https://doi.org/10.1017/CBO9781107284241.023**

Thomas, D., & Brown, J. S. (2011). *A new culture of learning: Cultivating the imagination for a world of constant change.* Createspace.

Umbreit, J., Lane, K. L., & Dejud, C. (2004). Improving classroom behavior by modifying task difficulty: The effects of increasing the difficulty of too-easy tasks. *Journal of Positive Behavior Interventions, 6,* 13–20. **https://journals.sagepub.com/doi/abs/10.1177/10983007040060010301?journalCode=pbia**

Vanderbilt, A. (2005). Designed for teachers: How to implement self-monitoring in the classroom. *Beyond Behavior, 15,* 21–24. **https://eric.ed.gov/?id=EJ845896**

Wandersman, A., Imm, P., Chinman, M., & Kaftarian, S. (1999). *Getting to outcomes: Methods and tools for planning, evaluation and accountability.* Center for Substance Abuse Prevention.

Notes

[1] Adapted from Nisar et al., 2022, citing Swain-Bradway et al., 2015.

[2] Nisar et al., 2022.

[3] Algozzine & Algozzine, 2007; Sugai & Horner, 2014.

[4] Hamre & Pianta, 2001.

[5] Rudasill et al., 2010.

[6] **https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5495479/**; Longobardi et al., 2021.

[7] Stanton-Salazar, 2011.

[8] Cherng, 2017.

[9] **https://greatlakesequity.org/resource/culturally-responsive-and-sustaining-learning-environments**

[10] Common & Lane, 2017.

[11] Sutherland et al., 2023.

[12] **https://aspe.hhs.gov/reports/willing-able-ready-basics-policy-implications-readiness-key-component-scaling-implementation**; Wandersman et al., 1999.

[13] Aidman & Long, 2017; Thomas & Brown, 2011.

[14] Scott et al., 2007.

[15] Banks & Obiakor, 2015.

[16] Center on PBIS, 2022.

[17] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Ialongo et al., 2019; Lynne et al., 2017; McHugh et al., 2016; Murphy et al., 2020; Radley et al., 2016; Rafferty et al., 2011; Stremel et al., 2022; Tanol et al., 2010; Vogelgesang et al., 2016; Williams et al., 2012.

[18] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Lynne et al., 2017; McHugh et al., 2016; Stremel et al., 2022; Williams et al., 2012.

[19] Ialongo et al., 2019; Murphy et al., 2020; Radley et al., 2016; Rafferty et al., 2011; Tanol et al., 2010; Vogelgesang et al., 2016.

[20] Nisar et al., 2022.

[21] **https://ci3t.org/measures** (Lane et al., 2010).

[22] Nisar et al., 2022.

[23] **https://www.withwayfinder.com/thought-leadership/five-reasons-you-should-co-create-classroom-norms-with-students-at-the-start-of-each-year**

[24] Croce & Salter, 2022.

[25] Nisar et al., 2022.

[26] **https://global-uploads.webflow.com/5d3725188825e071f1670246/63b86da10e8497d178fb888d_Supporting%20and%20Responding%20to%20Educators%E2%80%99%20Classroom%20PBIS%20Implementation%20Needs.pdf**

[27] https://ci3t.org/measures (Lane et al., 2010).

[28] Maag, 2004; Burden, 2006.

[29] Stormont et al., 2007.

[30] Clarke et al., 2016; Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Ialongo et al., 2019; Lynne et al., 2017; McHugh et al., 2016; Munro & Stephenson, 2009; Murphy et al., 2020; Radley et al., 2016; Rafferty et al., 2011; Stremel et al., 2022; Tanol et al., 2010; Vogelgesang et al., 2016.

[31] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Lynne et al., 2017; McHugh et al., 2016; Stremel et al., 2022.

[32] Ialongo et al., 2019; Murphy et al., 2020; Radley et al., 2016; Rafferty et al., 2011; Tanol et al., 2010; Vogelgesang et al., 2016.

[33] Libby et al., 2008.

[34] Pérez-Clark et al., 2023.

[35] Beaman & Wheldall, 2000; Jenkins et al., 2015.

[36] Libby et al., 2008.

[37] Partin et al., 2009.

[38] Mrachko et al., 2017.

[39] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Ialongo et al., 2019; Lynne et al., 2017; Markelz et al., 2019; McHugh et al., 2016; Murphy et al., 2020; O'Handley et al., 2018; Radley et al., 2016; Rivera et al., 2015; Stremel et al., 2022; Tanol et al., 2010; Vogelgesang et al., 2016; Williams et al., 2012.

[40] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Lynne et al., 2017; Markelz et al., 2019; McHugh et al., 2016; Rivera et al., 2015; Stremel et al., 2022; Williams et al., 2012.

[41] Ialongo et al., 2019; Murphy et al., 2020; O'Handley et al., 2018; Radley et al., 2016; Tanol et al., 2010; Vogelgesang et al., 2016.

[42] Pérez-Clark et al. (2023).

[43] Cooper et al., 2007.

[44] Lane et al., 2015.

[45] Umbreit et al., 2004.

[46] **https://iris.peabody.vanderbilt.edu/wp-content/uploads/misc_media/fss/pdfs/2018/fss_behaviro_specific_praise.pdf**

[47] Myers et al., 2011; Stichter et al., 2009.

[48] Solomon et al., 2012.

[49] Codding et al., 2008.

[50] Myers et al., 2011.

[51] Codding et al., 2005.

[52] Myers et al., 2011.

[53] Instructional choice is related to—yet distinct from—differentiated instruction. Differentiated instruction refers to teaching in a way that meets the different needs and interests of students using varied course content, activities, and assessments (**https://ctl.stanford.edu/differentiated-instruction#:~:text=Differentiated%20instruction%20involves%20teaching%20in,content%2C%20activities%2C%20and%20assessments**). In this way, instructional choice can be viewed as a variant of differentiated instruction. Instructional choice is also different from instructional accommodations, which refer to adaptations or changes in educational environments or practices that help students overcome the barriers presented by their disability.

[54] Lane et al., 2015.

[55] Algozzine et al., 2001.

[56] Ennis et al. 2018; Ennis et al., 2020; Ennis et al., 2021.

[57] Ennis et al., 2018; Ennis et al., 2020; Ennis et al., 2021.

[58] Kern & State, 2009; Lane et al., 2023.

[59] Ennis et al., 2018.

[60] Lane et al., 2015.

[61] Lane et al., 2015.

[62] Lane et al., 2015.

[63] Shogren et al., 2004.

[64] Lane et al., 2015.

[65] Ennis et al., 2018.

[66] Lane et al., 2015.

[67] Lane et al., 2015.

[68] Lane et al., 2015.

[69] Ennis et al., 2018; Dibley & Lim, 1999; Rispoli et al., 2013.

[70] Ennis et al., 2021.

[71] Lane et al., 2015.

[72] Lane et al., 2015.

[73] Lane et al., 2015.

[74] Clarke et al., 2016; Gardner et al., 1994; Munro & Stephenson, 2009; Narayan et al., 1990; Randolph, 2007.

[75] Common et al., 2020.

[76] Haydon et al., 2012.

[77] Clarke et al., 2016; Munro & Stephenson, 2009.

[78] Munro & Stephenson, 2009.

[79] Clarke et al., 2016.

[80] Haydon et al., 2013.

[81] Munro & Stephenson, 2009.

[82] Adapted from Clarke et al., 2016.

[83] **https://www.classroomcheckup.org/increasing-opportunities-to-respond/**; **https://tennesseetsc.org/wp-content/uploads/2020/12/Opportunities-to-Respond-Tips.pdf**

[84] **https://www.classroomcheckup.org/increasing-opportunities-to-respond/**

[85] **https://www.classroomcheckup.org/increasing-opportunities-to-respond/**

[86] Messenger et al., 2017.

[87] Lane et al., 2011.

[88] Hoff & Ervin, 2013; Menzies et al., 2009.

[89] Shapiro & Cole, 1994.

[90] Rafferty et al., 2011; Hoff & Ervin, 2013; Vogelgesang et al., 2016.

[91] Hoff & Ervin, 2013.

[92] Rafferty et al., 2011; Vogelgesang et al., 2016.

[93] Hoff & Ervin, 2013.

[94] Lane et al., 2011.

[95] Lane et al., 2011.

[96] Vanderbilt, 2005.

[97] Lane et al., 2011.

[98] Lane et al., 2011.

[99] Chafouleas et al., 2002.

[100] McHugh et al., 2016.

[101] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Ialongo et al., 2019; Lynne et al., 2017; McHugh et al., 2016; Murphy et al., 2020; Stremel et al., 2021; Tanol et al., 2010; Vogelgesang et al., 2016; Williams et al., 2012.

[102] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Lynne et al., 2017; McHugh et al., 2016; Stremel et al., 2021; Williams et al., 2012.

[103] Ialongo et al., 2019; Murphy et al., 2020; Tanol et al., 2010; Vogelgesang et al., 2016.

[104] See also the WWC Intervention on the Good Behavior Game: https://ies.ed.gov/ncee/wwc/Docs/InterventionReports/WWC_GBG_IR-report.pdf

[105] Studies were reviewed using the WWC Standards Handbook, Version 4.1, available at **https://ies.ed.gov/ncee/wwc/Handbooks**. The practice guide review protocol is available at **https://ies.ed.gov/ncee/WWC/Document/1302**.

[106] Following WWC guidelines, improved outcomes are indicated by a positive, statistically significant effect from a meta-analytic effect size calculated separately for each relevant outcome domain. For more information on how the WWC calculates these effect sizes and determines levels of evidence, see the WWC Standards Handbook, Version 4.1 at **https://ies.ed.gov/ncee/wwc/Handbooks**.

[107] Ialongo et al., 2019; Williams et al., 2012.

[108] Lynne et al., 2017; Markelz et al., 2019; O'Handley et al., 2018; Rivera et al., 2015.

[109] Clarke et al., 2016; Ennis et al., 2018; Ennis et al., 2020; Ennis et al., 2021; Markelz et al., 2019; Munro & Stephenson, 2009; O'Handley et al., 2018; Rivera et al., 2015.

[110] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Ialongo et al., 2019; Lynne et al., 2017; McHugh et al., 2016; Murphy et al., 2020; Radley et al., 2016; Rafferty et al., 2011; Stremel et al., 2022; Tanol et al., 2010; Vogelgesang et al., 2016; Williams et al., 2012.

[111] The overall review for Ialongo et al. (2019) on the WWC study page meets WWC standards without reservations because it is based on the main findings (for the largest sample in the study). However, the targeted subgroup findings for the study, which are considered main findings for the purposes of this practice guide, meet WWC standards with reservations.

[112] Hedges & Vevea, 1998. The WWC Procedures Handbook, Version 4.1 does not specify how effect size standard errors should be aggregated to the outcome domain level, so the review team used the metafor package in R.

[113] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Ialongo et al., 2019; Lynne et al., 2017; McHugh et al., 2016; Murphy et al., 2020; Radley et al., 2016; Rafferty et al., 2011; Stremel et al., 2022; Tanol et al., 2010; Vogelgesang et al., 2016; Williams et al., 2012.

[114] Williams et al., 2012.

[115] Ialongo et al., 2019.

[116] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Lynne et al., 2017; McHugh et al., 2016; Stremel et al., 2022.

[117] Murphy et al., 2020; Radley et al., 2016; Rafferty et al., 2011; Tanol et al., 2010; Vogelgesang et al., 2016.

[118] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Ialongo et al., 2019; Lynne et al., 2017; McHugh et al., 2016; Murphy et al., 2020; Radley et al., 2016; Rafferty et al., 2011; Stremel et al., 2022; Tanol et al., 2010; Vogelgesang et al., 2016.

[119] Ialongo et al., 2019.

[120] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Lynne et al., 2017; McHugh et al., 2016; Stremel et al., 2022.

[121] Murphy et al., 2020; Radley et al., 2016; Rafferty et al., 2011; Tanol et al., 2010; Vogelgesang et al., 2016.

[122] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Ialongo et al., 2019; Lynne et al., 2017; Markelz et al., 2019; McHugh et al., 2016; Murphy et al., 2020; O'Handley et al., 2018; Radley et al., 2016; Rivera et al., 2015; Stremel et al., 2022; Tanol et al., 2010; Vogelgesang et al., 2016; Williams et al., 2012.

[123] Williams et al., 2012.

[124] Ialongo et al., 2019.

[125] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Lynne et al., 2017; Markelz et al., 2019; McHugh et al., 2016; Rivera et al., 2015; Stremel et al., 2022.

[126] Murphy et al., 2020; O'Handley et al., 2018; Radley et al., 2016; Tanol et al., 2010; Vogelgesang et al., 2016.

[127] Ennis et al., 2018; Ennis et al., 2020; Ennis et al., 2021.

[128] Ennis et al., 2020; Ennis et al., 2021.

[129] Ennis et al., 2018.

[130] Clarke et al., 2016; Munro & Stephenson, 2009.

[131] Munro & Stephenson, 2009.

[132] Clarke et al., 2016.

[133] Hoff & Ervin, 2013; Rafferty et al., 2011; Vogelgesang et al., 2016.

[134] Hoff & Ervin, 2013.

[135] Rafferty et al., 2011; Vogelgesang et al., 2016.

[136] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Ialongo et al., 2019; Lynne et al., 2017; McHugh et al., 2016; Murphy et al., 2020; Stremel et al., 2021; Tanol et al., 2010; Vogelgesang et al., 2016; Williams et al., 2012.

[137] Williams et al., 2012.

[138] Ialongo et al., 2019.

[139] Dadakhodjaeva et al., 2019; Dillon et al., 2019; Fabiano et al., 2017; Hoff & Ervin, 2013; Lynne et al., 2017; McHugh et al., 2016; Stremel et al., 2021.

[140] Murphy et al., 2020; Tanol et al., 2010; Vogelgesang et al., 2016.