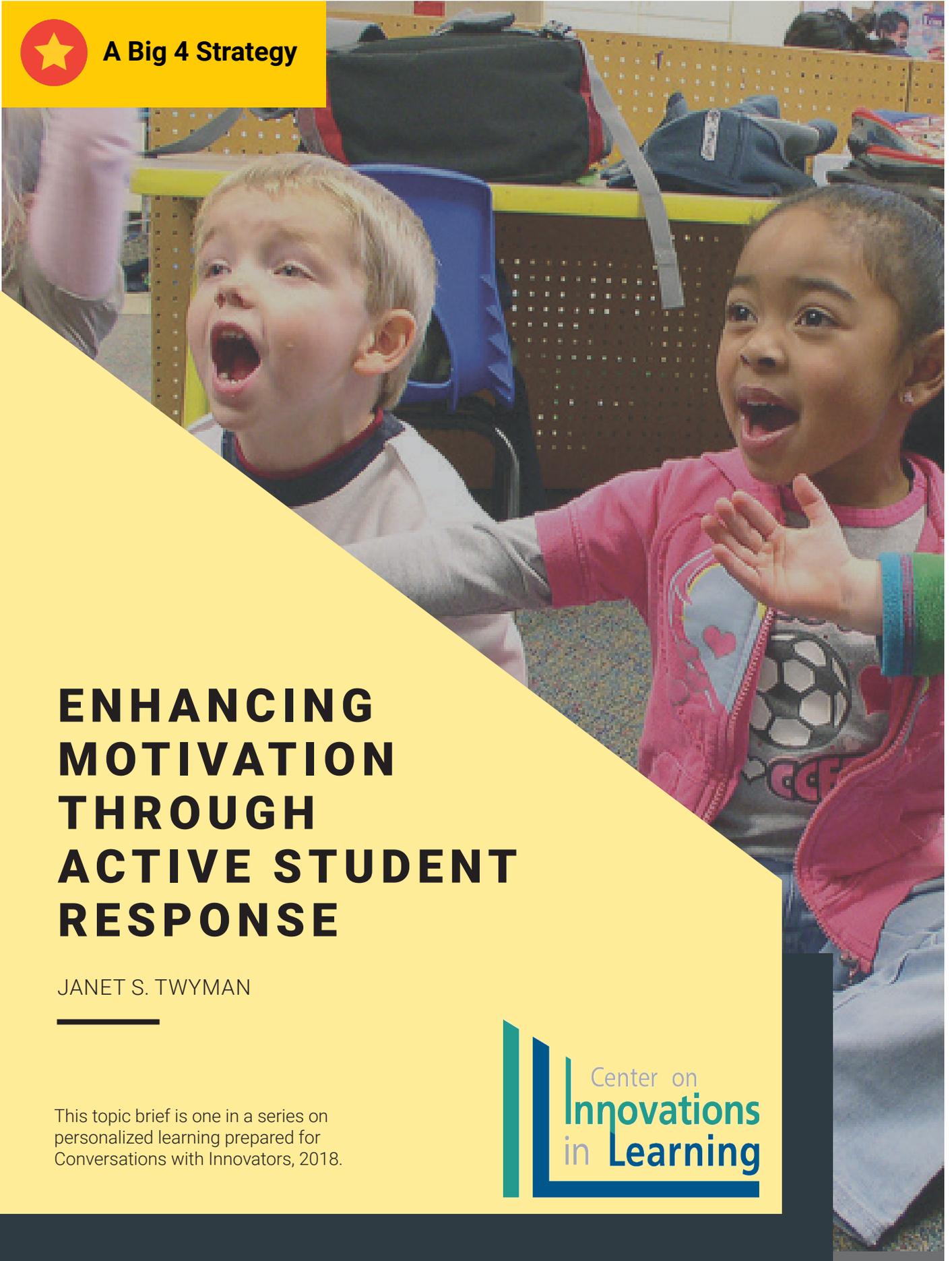# ENHANCING MOTIVATION THROUGH ACTIVE STUDENT RESPONSE

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Center on Innovations in Learning

JEFFREY

Jeffrey is a junior in Ms. Johnson's history class at Horace Mann High School. Like many of his classmates, Jeffrey lives in a single-parent household with his mother, Carmen. Carmen hopes for a better future for Jeffrey and has always encouraged him to do well in school. Although Carmen's encouragement is an important factor in Jeffrey's motivation in school, Ms. Johnson's teaching strategies also play a key role in his desire to learn and succeed.

Here's a glimpse into a typical class period for Ms. Johnson: At the beginning of each class, she conducts a review of concepts from the previous class using write-on **response cards**. Response cards allow Jeffrey and his classmates to respond to Ms. Johnson's questions simultaneously, increasing their active participation and engagement. Next, as she reviews major events and core concepts from the day's lesson, students actively follow along with **guided notes**. She quickly quizzes students on important dates, figures, and events using a **choral response** activity in which she asks a fact about an event and students simultaneously reply with the relevant brief answer. Finally, she ends the class session with **peer tutoring** (Rohrbeck, Ginsburg-Block, Fantuzzo, & Miller, 2003), in which students pair up and use a Talk Aloud Pair Problem Solving strategy to support close reading of a new chapter. Collectively, these strategies promote high levels of active student response among all students to increase their learning, retention, and academic achievement.[i]

We know that individual knowledge and ability are not the only factors impacting educational achievement. Amid the number of contextual, instructional, psychological, social, and demographic variables that affect student outcomes (Karadag, 2017), strong motivation and high engagement in learning have consistently been linked to increased levels of student success (Broussard & Garrison, 2004). In his discussion of student personal competencies, Redding (2014) defined motivational competency as "engagement and persistence in pursuit of learning goals" (p. 9). Motivational competency is often thought of as intrinsic or predominately something that is (perhaps inherently) "within" the student; there are in fact a number of instructional techniques that can help support and increase a student's engagement and participation in learning.

Active student responding (ASR; Heward, 1994) is one such instructional technique. ASR strategies promote meaningful engagement by all students and have been shown to increase student participation and decrease classroom disruption while also providing real-time formative assessment information to teachers. Thinking back to student engagement during Ms. Johnson's American history class, Jeffrey's opportunities to relevantly respond and participate in the instructional session were far greater than in a typical lecture or other common classroom structure. Considering the four ASR strategies used by Ms. Johnson (response cards, guided notes, choral responding [CR], and peer tutoring), Jeffrey (and each of his peers) actively wrote, spoke, or thought about the material at least 100 times in the 50-minute period. High rates of ASR not only increases motivation and performance, but they also provide Ms. Johnson with immediate, actionable information on how well individual and all students are learning and understanding the material.

How can teachers increase active student responding? The procedures are actually quite simple, and can be implemented by new or veteran teachers, with pre-K to college students, across all subject matter domains, in urban, suburban, rural, and even online settings. No special materials or tools are needed (digital technology options are available but not required), and instructional planning doesn't require much more time or expertise than usual.

Choral Responding[ii]

Choral Responding (Wood & Heward, 2005) uses brisk instructional pacing to increase student responsiveness to instruction. Used during group and whole-class instruction, students respond orally in unison as the teacher asks a series of questions that require brief responses (e.g., math facts, reading vocabulary, spelling words). It can be used to review material as well as teach new information and provides real-time formative assessment for the group as well as individual students (when called upon).

Prepping for Choral Responding

- Select curricular content appropriate for short questions and answers. Choose content for which students can make frequent responses (e.g., stating the vocabulary word for definitions, naming science concepts).
- Schedule a 5- to 10-minute CR session. Use short CR lessons for different subjects throughout the school day.
- Prepare your questions and instruction materials. Keep CR questions short and require only one correct, one- to five-word answers (e.g., How many sides does an octagon have?).

Conducting Choral Responding

- Model a few questions and responses for the class. (For example: Say, "I'm going to ask some questions about yesterday's science lesson. If I hold up this paper clip and ask, 'What will a magnet do to this object?' on my signal, you say, attract or repel.")
- Present questions clearly and directly. Avoid long explanations and discussions to maintain student attention to content.
- Allow thinking time. For difficult questions, have a longer pause between your question and your signal to respond. Hold your hand up with your palm out (as a gesture to "wait") to cue students to get ready to respond on your signal.
- Use a clear signal. Clear signals such as a snap, a clap, or simply saying, "everyone" indicate when it is the students' turn to respond. A cue helps students respond in unison, making it easier for the teacher to detect correct and incorrect responses.
- Give feedback on the group response. If all students respond correctly, give specific praise and move on to the next question. If most students respond correctly but a few do not, state the correct answer and return to it later. This will give those students an opportunity to correct their mistake.
- Call on individual students throughout the lesson. This formative assessment tactic allows you to assess low-performing students who may have difficulty with the content. If low performers answer correctly, you can be confident that other students are also correct. Use this as an opportunity to reinforce a student's accuracy, not to single out a student for his or her mistakes. Ask your question before calling on a student so that students don't "drop out" when it is not their turn.
- Maintain an energetic pace. Present the next question immediately after you have given feedback on the previous response. Fast pacing promotes students' participation, accuracy, and decreases off-task behavior.
- Deliver praise and approval for students' participation and correct responding. Your praise and approval can increase students' motivation and make the CR lesson more fun.
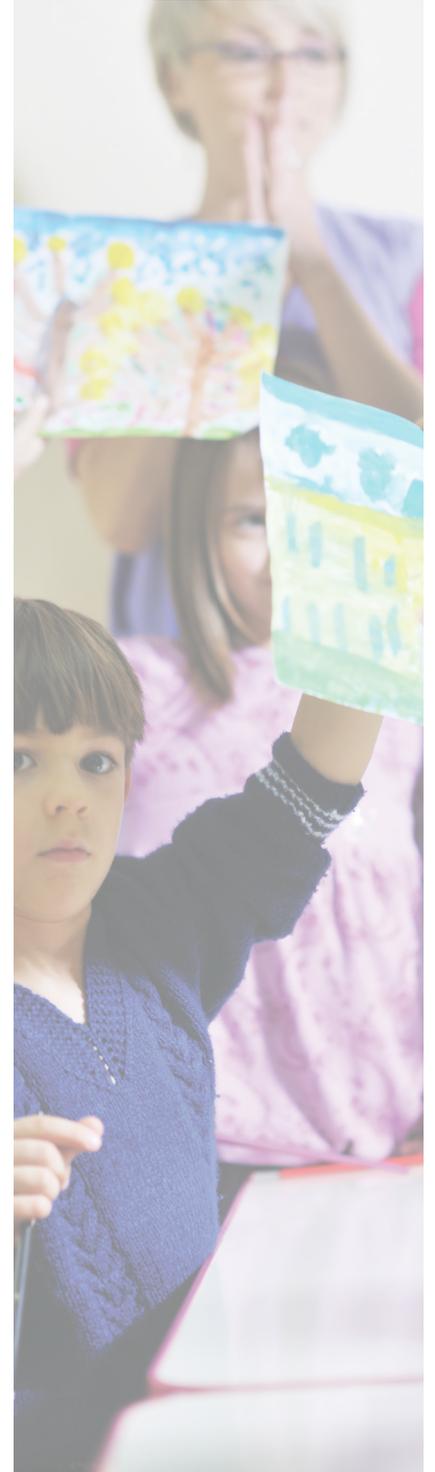
Response Cards[iii]

Response cards (Randolf, 2007) are simple to make and can be used in a variety of ways across different content areas and grade levels. Students simultaneously hold up a "card" in response to questions posed by the teacher. Students can also ask the questions of the class as another way for the teacher to check on their understanding. Advantages of response cards include:

- Every student is engaged all the time.
- The teacher is collecting formative assessment information as students are responding.
- The teacher can adjust instruction based on the immediate feedback she or he receives.
- Students receive immediate feedback from the teacher.

A simple way to create a response card is to fold an 8½" x 11" paper (lined or unlined) in half and then half again. This creates eight faces on which students can write individual responses. These cards can be used across a variety of content and purposes: to check basic mathematics facts or responses to mental math problems, to practice recall of a science term based on a verbal description given by the teacher, or to check understanding of geography terms by drawing the formation named by the teacher (or peer).

Response card can have "premade" content; old cardboard cut into pieces can serve this purpose well, for example, the words "Yes" and "No" written on either side or the same side of the card (two different colors can serve the same purpose). Cards can be made with numbering from 1 to 3 or 1 to 5. This approach easy supports multiple-choice questions but also can be used to gauge how students feel about issues. Smiley or frowning faces or words at the extremes help students know what the numbers mean. Additionally, responses cards can be used for short answer open-ended responses. Depending on their ages and abilities, students can draw or write responses to more complex or creative prompts, including:

- From the description I just read, draw a picture of the setting for this story or scene.
- Why did the main character respond in that way?
- What do you think will happen next in the story?
- In three of your blocks on your response card, draw or write the beginning, middle, and end of the story.
- Write at least four different math sentences to express 18, including the use of addition, subtraction, multiplication, or division.
- What are you thankful for?

Guided Notes

Guided Notes (Konrad, Joseph, & Eveleigh, 2009) are pre-prepared handouts or other resources that support new content, but leave "blank" space for key concepts, facts, relationships, definitions, and so on. They are an ASR strategy that creates systematic student response opportunities during lectures. As students listen and learn, they fill in the blank spaces with the new information. Guided notes work well with lessons that require students to listen carefully and to take accurate notes and provide a way to convert an often-passive activity into a more active one while also improving the quality of students' listening and note-taking skills (and enhancing academic performance). Examples include worksheets provided during lectures, visual or graphic organizers, word maps, or similar format that increases student involvement while listening to lectures, watching a video, or even reading assigned text.

Creating and Implementing Guided Notes

- The teacher prepares a set of notes, an outline, or an organizer that contains the essential information that will be covered.
- The outline should contain consistent cues, such as bullet points, to draw students' attention to salient points in the lecture; special cues (e.g., stars, bells) can be used to draw students' attention to particularly important information.
- The teacher then removes key content and creates blank spaces for the missing information. Blank spaces should allow for one- to three-word responses, and the location of the spaces should vary to keep students focused on note taking.
- Before distributing the guided notes, the teacher should ensure that students understand their responsibility to attend to content covered in the lecture or the reading and to fill in each of the blanks in the guided notes with the appropriate concepts, definitions, or other content.
- Guided notes must have meaning for the students, which requires occasionally checking them for completeness or accuracy. There are several options to verify that students are actively completing guided notes: the teacher can randomly (unpredictably) collect and review them for accuracy and completeness or conduct spot checks of individual students' guided notes; students can pair up and compare their guided note responses or exchange or share guided notes for later study, or the teacher can displays the guided notes (via overhead projector, computer projector, or interactive whiteboard) and fill in blanks with appropriate facts or concepts as they are presented.

Like other ASR strategies described here, Guided Notes can be used across content areas and student populations. Older students can also be given the *responsibility for creating guided notes for themselves or for the class (divided by topic, chapter, and so on)*. The teacher and peers should then review (and edit the notes as needed). For students with varying abilities, teachers might prepare different versions of guided notes, some with more complexity and others with more prompts and structure. Guided notes could also be completed in pairs or small groups, with peers helping students who may need more assistance.

Choral Responding, Response Cards, and Guided Notes are only three of a number of research-proven strategies to increase student motivation, engagement, and learning during whole-group instruction. As mentioned with Jeffrey and Ms. Johnson's class, specific peer-tutoring strategies such as class-wide peer tutoring (Bowman-Perrott, 2009) and Talk Aloud Pair Problem Solving (TAPPS; Robbins, 2014) are also shown to improve student outcomes. Class-wide peer tutoring typically follows whole group instruction, when students work in small groups or pairs on activities that support the lesson. For example, following a class discussion about new vocabulary words, pairs of students are given a folder containing cards with words on one side and definitions on the other and point sheets to track progress. Students take turns quizzing one another, providing positive feedback and error correction to their partners and tracking each other's progress along the way. When ready, they get "checked-out" by the teacher or another peer team. During a TAPPS session, students pair up to be active problem-solvers and listeners, taking turns to talk about what they are thinking as they work through the problem and checking each other's thinking along the way.

Additional Strategies

Other strategies incorporate teams within the class to increase motivation, responding, and learning. One example is Numbered Heads Together (Haydon, Maheady, & Hunter, 2010), which encourages four-person teams to "put your heads together, think of the best answer you can, and make sure that everybody in your group knows that answer" to a teacher-provided question. After a brief think and discuss interval (often 30 seconds), the teacher randomly picks a student to answer and confirm the response by asking, "How many students (or groups) think that that answer is correct?" before giving feedback about the answer.

Another team strategy is commonly known as the Good Behavior Game (Barrish, Saunders, & Wolf, 1969) that awards teams points for active, accurate responding by team members and can be used both for academic and pro-social behaviors. And finally, high rates of ASR can also be used to build fluent academic responding, as with time trials (aka, fluency timings). In time trials, the teacher describes the task and how much time students will have to respond (often 20-seconds to 1-minute). On signal, all students begin writing their answers and put down their pencils when the teacher indicates the time is up. Students can chart their own progress and try to improve over time.

There are a number of empirically verified procedures to increase ASR that simultaneously build motivation competencies and improve academic and social outcomes (Bowman-Perrott et al., 2013; Rohrbeck, Ginsburg-Block, Fantuzzo, & Miller, 2003; Sharma & Sharma, 2018). These strategies increase teacher effectiveness during whole-group instruction, are easy to learn and implement, and should be an important tool in any teacher's learning strategies toolkit.

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