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i>clicker Teaching Tips

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i>clicker Teaching Tips: Using Classroom Response Systems with Special Needs Students in Elementary Inclusion Classrooms

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Overview

Classroom response systems ("clickers") can increase the learning, engagement, and participation of students with special needs in an inclusion setting. There are clear benefits as well as challenges and solutions when using clickers effectively in an inclusion classroom.

Like all technology, CRS are not a magic bullet for special needs students. Teachers need to think carefully about how to implement a classroom response system in the classroom—including setting sustainable ground rules and considering question content and format that are appropriate for students with special needs.

Although students may experience different degrees of low-incidence (e.g., Autism, cognitive, hearing or visual impairments) to high-incidence disabilities (e.g., learning disabilities, emotional disturbance, or speech/language impairments), CRS can be used effectively for *all* students when specific adaptations (e.g. accommodations and/or modifications) are implemented. It should be noted that special educational services and programs must be tailored to the individual needs of students. Therefore, thoughtful consideration of the appropriateness of CRS for any student with special needs must be made.

Motivation for using clickers in an inclusion setting:

Classroom response systems can help:

- Engage *all* students in learning.
- Increase student interaction.
- Help teachers identify students who need additional help understanding a topic in a low-stakes setting.

When teachers pose questions to the whole class, clickers provide an opportunity for students with low self-confidence to respond with less fear of having the "wrong" answer. Teachers have long attempted to make class interactive via a number of methods—calling on specific students or posing questions to the whole class. Students are often unwilling to speak up because of fear of mistakes or embarrassment. When using CRS, *all* students respond to questions because they feel their answer is private (even though the teacher can ultimately link the individual student's votes to their clicker). Consequently, students readily engage in the classroom activity.

Effective use of CRS benefits special needs students in elementary inclusion classrooms by

- engaging students in a high-interest activity that is different from a pencil-and-paper test;
- increasing the amount of time that students can participate in the least restrictive environment;
- supplementing verbal instructions with visual aids;
- assessing misconceptions;
- conducting frequent comprehension checks;
- limiting the number of concepts introduced at one time;
- providing an alternative way for students to demonstrate knowledge other than through oral and written expression;
- providing immediate feedback to students;
- decreasing the number of materials students are responsible for in their work area; and
- establishing an organized routine for lunch count, attendance, and classroom votes.

Challenges:

However, teachers and students can face several challenges when using CRS in an inclusive elementary classroom. A few challenges are listed below.

- It can be challenging to manage different time needs when students respond to questions. Students often exhibit varied rates of thinking, problem solving, and expression that require differentiation.
- It is possible that some students may find that remotes are distracting for them. For instance, a student may focus on the novelty of the remote itself, while other students are considering the next set of CRS questions.
- Students can get the "right" answer by observing a nearby student click the right responses. Thus, the answer does not necessarily indicate student understanding. Conversely, students who did not get it "right" may have an issue with rapid reading and listening comprehension but when questioned individually may know the answer.

Recommended solutions:

Teachers can differentiate instruction when using clickers with students with special needs in elementary inclusion classrooms. Below are suggestions to maximize the learning, engagement, and participation of students:

- Set alternate time limits for students with special needs.
- Keep the polling time open; We recommend using the "count up" timer feature of the CRS, which enables teachers to keep the question open until all students have comfortably been able to respond. Research indicates that maintaining a fairly open policy on timing (or increasing time per question) benefits all students—both students with and without disabilities.
- Limit the number of four-response questions. Include more two-response questions.
- Simplify the language of the question and possible responses.
- Include photos of words or key phrases when possible.
- Read each PowerPoint slide aloud to students.

- Ensure that students who respond more quickly don't blurt out answers before other students have time to consider the question.
- Provide a task for those who finish answering quickly, such as a buddy check and/or reminder prompts about rechecking answers before entering.
- Color code letters on remote buttons.
- Use a remote holder (e.g., attach the remote with Velcro to the desk) to increase students' attention to the class activity.
- When using CRS to teach facts and concepts, arrange data tables with questions and answers about key concepts around the room.
- Visually impaired individuals can navigate the six buttons on the remote using the raised battery compartment as a tactile reference point. Braille stickers (provided by the vendor) can be placed alongside the buttons. Specially designed vibrating clickers allow blind students to receive a vibrating vote confirmation. Color-blind students can be taught to distinguish the steady light of the received vote from the blinking light that indicates votes that have not yet been received.

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