

## MORE LEARNING

A large and growing body of educational research on the relationship between student participation and academic achievement has made one finding very clear: *Students who respond actively and often to ongoing instruction learn more than students who passively attend.* (For reviews of this research, see Fisher and Berliner [1985] and Greenwood, Delquadri, and Hall [1984]). Active student response (ASR) is a direct measure of student participation in the classroom. ASR occurs each time a student makes an observable response to ongoing instruction.

The kinds of responses that qualify [as ASR] are as varied as the kinds of lessons that are taught. Depending upon the instructional objective, examples of ASR include words read, problems answered, boards cut, test tubes measured, praise and supportive comments spoken, notes or scales played, stitches sewn, sentences written, workbook questions answered, and fastballs pitched. The basic measure of how much ASR a student receives is a frequency count of the number of academic responses emitted within a given period of instruction. (Heward, 1994, p. 286)

All things being equal, *a high-ASR lesson will produce better achievement than one in which students make few active responses to the lesson's content.*

## INCREASED ON-TASK BEHAVIOR

Several studies have found increased levels of on-task behavior and reduced off-task or disruptive behavior as correlates or functional outcomes of increased ASR (e.g., Carnine, 1976; Miller, Hall, & Heward, 1995; Sainato, Strain, & Lyon, 1987). On-task behavior is a weak correlate of learning and should not be the primary goal of any intervention designed to increase achievement. A student can be perfectly on-task yet make no meaningful responses to the lesson. However, increasing the degree to which students pay attention and do not disrupt others during instruction has some important advantages:

- The on-task student is more likely to see and hear important instruction than the student who is off-task or disruptive.
- Peers are better able to see and hear instruction when a student's disruptive behavior is reduced.
- Teachers are pleased when their students are well-behaved and are more likely to use instructional strategies associated with increased on-task behavior.

## IMMEDIATE FEEDBACK FOR THE TEACHER

Teachers often check the effectiveness of an ongoing lesson by asking students, "Do you understand?" But the feedback provided by this type of check can be misleading. Students will sometimes answer "Yes" when, in fact, they do not understand, because:

- "Yes" answers are greeted with smiles and nice words from the teacher, which serve to reinforce saying "Yes."
- They don't want to admit to not understanding when all of their peers are nodding their heads and seem to understand.
- "Yes" answers avoid aversive consequences from the teacher, such as disappointed looks, reprimanding questions, recommendations to "pay better attention" next time, or—worst of all for the whole class—a repeat of the entire demonstration or explanation.
- They don't know they don't understand. Some skills look easy when performed and explained by the teacher; but watching and doing are not the same thing.

When a brave soul does admit to not understanding, the teacher usually probes further to determine *what* the student does not "understand." This probing can be aversive to both teacher and student, perhaps causing the teacher to avoid asking students (at least that student) if they understand and encouraging students to say they understand whether or not they really do.

These potential problems are avoided when ASR occurs frequently throughout a lesson. *ASR provides immediate and ongoing feedback on students' learning, so the teacher never needs to ask, "Do you understand?"* The accuracy and fluency with which students respond help the teacher determine what instructional changes, if any, might be made during the lesson itself in an effort to improve the lesson's effectiveness "on the spot."

When instruction includes high-ASR activities, not only is it hard for students to simply passively attend, it is equally difficult for teachers to avoid direct and frequent feedback on the effectiveness of their teaching. Thus, teachers maintain the "close, continual contact with relevant outcome data" they need to make good instructional decisions (Bushell & Baer, 1994).