Learning and skill development are enhanced when active and accurate responding is increased. Active responding simply means students must perform academic behavior (completing a problem, reading a passage). Because practicing incorrect responding is unlikely to enhance learning, it is important that these responses be correct or accurate. However, when provided with opportunities to engage in academic responding, often students cannot or will not respond.

"Can’t Do" Problems

"I don’t know what to do." Understanding assignments is a prerequisite for correct responding. During independent seatwork, students may not be aware that they are responding incorrectly. To prevent this from occurring, teachers frequently circulate around the room, monitoring student performance and providing corrective feedback when necessary. Peer-monitoring, self-monitoring, and technology also can be used to provide immediate corrective feedback.

Students who do not understand assignments often raise their hands and ask for help. If teachers think the student’s inattention during teacher-led instruction caused this lack of understanding, they may be concerned that providing additional instruction will reinforce inattention. While this may be true, teachers should not discourage students from asking for help. Otherwise, teachers may not notice that assignments were misunderstood until the student turns in the assignment with many errors and/or little work completed.

"I forgot my book." Can’t do problems can occur when students do not have the materials required to do assigned work. This can frustrate some teachers, who may refuse to provide the materials. In these cases, the student does nothing and may fail. Teachers may allow these natural consequences to prevail so that the student learns responsibility. However, teachers should consider giving the student the needed materials because allowing the student to sit passively reduces learning opportunities and may teach students that doing academic assignments is not really that important.

"I don’t have time to respond." Sometimes students do not have time to complete assignments or academic tasks accurately. For example, a teacher may be leading a discussion where students raise their hands to answer questions. The goal is to have each member of the class respond. Therefore, teachers rarely call on a student before asking a question, because this may encourage only the student who was called upon to respond. A similar situation occurs when the interval between the question being asked and the answer being provided (referred to as wait time) is too brief. Once a student provides the correct answer out loud, classmates who are in the process of answering in their head typically stop attempting to respond. Therefore, teachers rarely call on the first person to raise his or her hand; instead they give the entire class time to respond. Such procedures can increase active class-wide cognitive (in their head) responding. However, teachers can only assess the accuracy of the response for the student who was called to answer. One solution is to provide students with a mechanism so that each student responds. For example, after a question is asked, students can write their answers on cards and then raise their cards to show the answer. This approach increases the probability of students answering and allows teachers to get a sense of which students were correct. The teacher can then re-teach or clarify as needed.

"I don’t have the prerequisite skill to respond." The most serious can’t do problem occurs when a student lacks the prerequisite skills to complete assigned tasks. Curriculum-based assessment and measurement procedures have been designed to identify skill deficits, and numerous remediation and accommodation procedures have been developed to address identified problems. Once these
prerequisite skills are identified, teachers can attempt to teach these skills or employ accommodation procedures that allow the students to respond accurately despite these skill deficits.

"Won't Do" Problems: A Matter of Choice

If a student can do assigned work, academic engagement becomes a matter of choice. Choosing to engage in academic work is continuous and often unconscious behavior. For example, a teacher may assign reading, and Jack may begin. However, at any given moment in time (continuous choice) Jack can stop reading and engage in another behavior (thinking about lunch). While Jack's choice behavior may not have taken a large amount of thought or time (unconscious choice), he still made that choice. In this case, Jack made an unconscious choice to stop working and think about lunch instead.

Several principles can be applied to increase the probability that students will choose to do their work.

Empowering students. Providing assignment choices, thus empowering students, can increase the likelihood that students will work on and complete their academic tasks. Providing choices may also decrease the likelihood that they misbehave. Providing assignment choices is most appropriate when the results will be equal levels of learning.

Path of least resistance. When assignments are not equivalent, the principle of least effort suggests that providing choices may limit some student learning. When given the choice of two behaviors and everything else is equal, students will choose to do whatever requires the least effort. Thus, when teachers provide students with assignment options, students are more likely to choose the assignment that requires the least amount of work as opposed to the more challenging assignment that may, in fact, enhance their learning to a greater degree. Fortunately, strengthening reinforcement for desired behavior (rewards for doing well on assignments) can address this problem.

Relative reinforcement for competing behavior. When provided a choice of two or more behaviors requiring equal effort, students are more likely to choose to engage in the behavior that results in more immediate reinforcement, higher rate reinforcement, and/or higher quality reinforcement. Teachers can increase the probability of students choosing to do their assigned work by both enhancing reinforcement for working on assigned tasks (increase rate of delivering praise for doing work) and weakening reinforcement for other competing behaviors (stop providing attention for shuffling papers).

Targeting and Reinforcing Behaviors

Teachers may attempt to eliminate competing inappropriate behaviors with extinction (stop reinforcement for these behaviors). However, extinction is difficult to implement in classrooms. Consider the class clown who chooses to engage in disruptive behaviors that are reinforced with attention. Despite their best efforts, teachers and classmates cannot always ignore such behaviors. Instead, reinforcement (laughing) is less frequent and intermittent, which may maintain disruptive behaviors. While this concern has merit, because choice behavior is based on relative reinforcement strength for competing behaviors, perfect ignoring is not necessary. Rather, altering the classroom so that reinforcement for academic responding is superior to reinforcement for disruptive behaviors can increase the likelihood of the student doing assigned work. Several components of reinforcement programs including target behaviors, criterion, and reinforcers should be considered when attempting to strengthen reinforcement for academic responding.

Target behaviors. Much emphasis is placed on reinforcing students' performance on exams. While exams may be effective for measuring learning, they provide few opportunities for active responding. Therefore, teachers also must reinforce accurate academic responding during activities that cause learning, including independent seatwork, discussion, homework, and collaborative learning activities.

Criteria. How well do students have to do in order to get the reward or reinforcement? This is a difficult question to answer, especially when each student has the same target behavior and the same criteria for the same reinforcers. Because these procedures are considered fair, they are often used for academic performance. However, keeping everything the same across students is not always effective, particularly with students with poorer academic skills who require much effort to meet the common criterion. For example, the class has to complete the even-numbered problems on pages 19 and 20 in their textbook, and 80–100% correct earns the class free time.

One solution is to alter the target behavior and/or criterion for earning rewards across students. However, making different reward programs for each student is time consuming, often considered unfair, and can cause social problem among classmates. Even when these limitations can be addressed, it is difficult to set a criterion that is just right for each student. Some criteria are too low; the student could do better. Others are too high; the student gives up. While previous performance data can help guide these decisions, it is difficult to set a criterion that will maximize a student's performance.
One strategy is to set cumulative criteria. For example, each problem on mathematics homework completed correctly could be totaled each day and students could earn a reward when they got their two hundredth problem correct. Thus, each problem correct, no matter how few or how many, brings the student closer to earning the reward.

Another strategy is to encourage students to do their best and then randomly select the criteria to earn the reward after students have finished their assignments. Thus, the better students do, the more likely they are to earn reinforcement. Because the specific criterion is not known, each student (those with strong and weak academic skills) would do his or her best.

A third strategy is to apply interdependent group reinforcement programs where the entire class gets the reward, based on the class’s performance meeting a criterion (class average of 80% on assignment). This type of program can cause several desirable outcomes. If students do not know how well their peers are doing, they do not give up (“I’ll never be able to do that well.”), or do less than their best (“I don’t need to work any harder. I already got 80%.”). Because the probability of students receiving access to reinforcement is enhanced when they do their best and their peers also do their best, classmates are likely to encourage or help each other do their best. Because access to reinforcement is given to all or none of the students, students are less likely to belittle those who do not earn reinforcers. Students who rarely earn reinforcement for their academics can still contribute to the group earning a reward. Finally, because students with more difficult assignments benefit when peers are given easier assignments, teachers can alter assignments across students without being concerned about students complaining that it is not fair.

Popkin and Skinner (2003; see “Resources”) showed that such programs could be very effective. In the final phase of their study, a teacher randomly selected a target behavior (mathematics, spelling, or grammar assignment performance) and criterion (class average of 70, 75, 80, 85, 90, 95, and 100% correct) and provided a reward to all the students when the class average met the randomly selected criterion. The likelihood of earning the reward was enhanced when students did their best in spelling, mathematics, and grammar. If a student did poorly on one assignment, then the student could still help the group earn the reward by working hard on the next assignments. Results showed large increases in performance across students and subject areas.

**Reinforcers.** Teachers often use tangible rewards because they can easily be delivered to some students (those who earn them) and not others. However, teachers should be aware that some students who do not earn rewards might get them by stealing or buying them, or when peers share them (e.g., Skinner, Skinner, & Sterling-Turner, 2002). Additionally, many teachers may object to using powerful tangible rewards (candy, toys).

While tangible reinforcers are often powerful, less powerful reinforcers can be equally effective when they are delivered at higher rates and more immediately. For many students, praise is a reinforcer. However, students with poor academic skills infrequently earn praise for their academic performance. Wallace, Cox, and Skinner (2003) addressed this by altering assignments. An elementary student was referred because he would only complete 10–15% of his math assignment, which made it almost impossible for the teacher to praise his work. The solution was simple: Rather than giving the student one long assignment with 30 problems on a page, a paper cutter was used to make five or six brief assignments. When the student finished the first brief assignment, he raised his hand, the teacher provided social reinforcement in the form of verbal praise and high fives, and gave him another brief assignment. When he finished that assignment, more social reinforcement was delivered along with the next brief assignment. This procedure increased the quality and quantity of the student’s work and the teacher’s use of social rewards without reducing assignment demand or lowering the teacher’s expectations and standards.

Often activities (listening to music during independent seatwork) are powerful and inexpensive rewards. Because it is often difficult to deliver activity rewards to some students and not others, activities are typically used when a program is set up so that the entire group either earns or does not earn the reward (e.g., interdependent group contingencies). Some rewards are powerful for some students, but not others. Using unknown or randomly selected rewards can solve this problem as shown by Popkin and Skinner (2003). Additionally, by allowing students to suggest rewards, Popkin and Skinner ensured that the reward pool contained at least one powerful reward for each student. Moreover, by allowing them to suggest reinforcers, the students felt empowered and the assignments were not watered down. The result was that the students generated some unorthodox, creative, efficient, and powerful rewards (teacher wears pajamas to school).

**Conclusions**

Some are concerned that students should not be reinforced for doing what they should be doing. An alternative view is that students are doing what they should be doing, based upon relative reinforcement and the effort required for competing behaviors.
If teachers understand how to alter these variables, then they can increase active, accurate, academic responding and learning rates while decreasing competing inappropriate behaviors.

Resources


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