

**Strategies for Communicating High Expectations to Students**  
**November 15, 2004**  
**TIP # 3**

**RESPONSE OPPORTUNITIES**

***WAIT TIME***

Research has shown that educators often deny students the opportunity to learn by asking more challenging questions of perceived high achieving students and providing high achievers more wait time during questioning, while paying less instructional attention to under performing students.

Most teachers practice very little "wait time" or "latency", typically less than or about one second. Information processing involves multiple cognitive tasks that take time. Students must have uninterrupted periods of time to process information; reflect on what has been said, observed, or done; and consider what their personal responses will be.

Mary Budd Rowe invented the concept of "wait-time" as an instructional variable (1972). The "wait-time" periods she found--periods of silence that followed teacher questions and students' completed responses--rarely lasted more than 1.5 seconds in typical classrooms. She discovered, however, that when these periods of silence lasted at least 3 seconds, many positive things happened to students' and teachers' behaviors and attitudes. To attain these benefits, teachers were urged to "wait" in silence for 3 or more seconds after their questions and after students completed their responses (Casteel and Stahl, 1973; Rowe 1972; Stahl 1990; Tobin 1987).

For example, when students are given 3 or more seconds of undisturbed "wait-time," there are certain positive outcomes:

- The length and correctness of their responses increase.
- The number of their "I don't know" and no answer responses decreases.
- The number of volunteered, appropriate answers by larger numbers of students greatly increases.
- The scores of students on academic achievement tests tend to increase.

When teachers wait patiently in silence for 3 or more seconds at appropriate places, positive changes in their own teacher behaviors also occur:

- Their questioning strategies tend to be more varied and flexible.
- They decrease the quantity and increase the quality and variety of their questions.
- They ask additional questions that require more complex information processing and higher-level thinking on the part of students.

The convention is to use 3 seconds as the minimum time period because this time length represents a significant break-through (or threshold) point: after at least 3 seconds, a significant number of positive things happen to students and teachers. The concern here is

not that 2.9 seconds is bad, while 3 seconds is good, and 5.3 seconds of silence is even better. The concern is to provide the period of time that will most effectively assist nearly every student to complete the cognitive tasks needed in the particular situation. The teacher's job is to manage and guide what occurs prior to and immediately following each period of silence so that the processing that needs to occur is completed.

### **Categories of Periods of Silence**

There are eight categories of "wait/think" time named either according to the place they occur or by the primary function they perform during conversations and discussions. These categories are subsumed by the overarching concept of time to think, process information, and respond. In this month's tip we will share 4 of the 8 categories. Next month's tip will include the remaining 4 categories.

#### **(1) Post-Teacher Question Wait-Time**

The typical teacher pauses, on the average, between 0.7 and 1.4 seconds after his/her questions before continuing to talk or permitting a student to respond. When teachers perceive a student as being slow or unable to answer, this period of time is frequently less than .7 seconds. Post-teacher question wait-time occurs when a period of 3 or more seconds of uninterrupted silence follows a teacher's question, so that students have sufficient uninterrupted time to first consider and then respond to the query. To be most effective, this period of silence should follow a clear, well-structured question with the cues students need to construct adequate answers.

#### **(2) Within-Student's Response Pause-Time.**

Within student's response pause-time occurs as a student pauses or hesitates during a previously started response or explanation for up to or more than 3 seconds of uninterrupted silence, before continuing his/her answer. By definition, no one except the student making the initial statement can interrupt this period of silence. The student may or may not need or take the full 3 seconds, or he/she may need more than 3 seconds; it is up to the student to make this decision. Having an opportunity for sufficient time to finish their previously started answers is an uncommon occurrence for students. The widespread practice is for teachers to interrupt or cut students off from completing their responses, especially when the pauses are beyond .5 seconds. Students often follow these periods of silence by volunteering, without teacher prompts, information that is usually sought by the teacher.

#### **(3) Post-Student's Response Wait-Time.**

This 3 or more seconds of uninterrupted silence occurs after a student has completed a response and while other students are considering volunteering their reactions, comments, or answers. This period allows other students time to think about what has been said and to decide whether they want to say something of their own. If students are to interact with one another during discussions, they must be given the time needed to consider one another's responses so that they can have dialogue among themselves.

#### **(4) Student Pause-Time**

Student pause-time occurs when students pause or hesitate during a self-initiated question, comment, or statement for 3 or more seconds of uninterrupted silence before finishing their self-initiated statements. By definition, no one except the student making the initial statement can interrupt this period of silence. The student may or may not need or take the full 3 seconds or may need more than 3 seconds. It is up to the student to make this decision.

***Remember to look for 4 more categories in next month's tip.***