Wait Time: Making Space for Authentic Learning

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What Is Wait Time?

Wait time refers to two specific practices where instructors deliberately pause. First, wait time 1 constitutes a 3-5 second pause between asking a question and soliciting an answer. Second, wait time 2 is a 3-5 second pause after a student response. This time provides students with time to think about the question and develop a response, either to the instructor's question or a peer's response. As a result, more students may be willing to answer the question and responses may be more thoughtful. While this deliberate pause sounds simple to implement, many instructors have been habituated to resist any silence in the classroom and may find it surprisingly difficult to enact this pause.

Introduction to Wait-Time

Writing that "Reading and writing float on a sea of talk," James Britton argued that engaged classroom discussion, substantive interactions between teachers and learners, as well as student-to-student interactions are crucial to learning (p. 11). But through a two-year study of 450 language arts and English classes, Martin Nystrand and his colleagues (1997) discovered "most schooling is organized … for the plodding transmission of information through classroom recitation. Teachers talk and students listen. … Almost all teachers' questions, moreover, required students to recall what someone else thought, not to articulate, examine, elaborate, or review what they themselves thought" (3). Other researchers have described this form of classroom discourse as IRE: teachers **interrogate** by posing a question to the class, a student **responds**, and the teacher then **evaluates** that student response before once again interrogating the class, thus beginning the cycle again. In IRE-dominated classrooms, teachers dominate the classroom talk through more turn taking, more floor time, and by establishing the terms of the discussion (Cazden, 2001; Nystrand et. al, 1997; Tobin, 1987). Additionally, research has suggested that the time faculty wait for responses to their questions rarely lasts longer than 1.5 seconds, implicitly suggesting to students that the questions are not authentic questions which teachers expect students to answer.

In response to research on IRE classroom talk patterns, Mary Budd Rowe developed and studied the effects of a concept she described as "wait time." Her research demonstrated that "If teachers can increase the average length of the pauses at both points [after **interrogation** and after student **response**], namely after a question (wait time 1) and, even more importantly, after a student response (wait time 2) to 3 seconds or more, there are pronounced changes (usually regarded as improvements) in student use of language and logic as well as in student and teacher attitudes and expectations" (Rowe 43). Rowe identified several improvements in student learning as a result of wait time:

- An increase in length of student responses

- An increase in the number of unsolicited but appropriate student responses
- An increase in speculative responses
- A decrease in the number of students failing to respond
- An increase in the number of responses by students identified by their teachers as slow learners
- An increase in the scores of students on academic achievement tests

Stahl noted that when teachers practice wait time, positive changes occur in their own behavior:
- 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 positive changes can lead to students taking more control over the conversation, through asking and answering their own questions of each other or the instructor. However, the interactive, student-driven discussion which wait time facilitates is not a free for all, unguided by faculty, where anything goes. Instead, faculty responsibilities shift from mediating every student contribution (thus, establishing the instructor at the center of the learning environment) to being responsive to student contributions by:
- guiding conversation to productive avenues of thinking;
- answering factual questions and clearing up misinterpretations;
- creating space for students trying unsuccessfully to join into the discussion

Implementation

When initially establishing student-led classroom talk using wait time, teachers may have to wait longer than 3-5 seconds in order to convince students that their participation is authentically desired. Students may not be used to this wait-time, may expect the teacher to evaluate the student response, and the silence may make both you and your students uncomfortable. To mediate this challenge, faculty can avoid eye contact by looking through the text or writing notes while waiting for the student response.

1. **Arrange the room so that everyone can make eye contact with everyone else.** In contrast, in an IRE-dominant classroom, the instructor mediates every student contribution to the discussion. All students face the instructor because student engagement in conversation with one another is not emphasized
2. **Pose good questions.**
   a. Use authentic questions; "questions without pre-specified answers" (Nystrand, 7).
      i. "Authentic" questions convey the teacher's interest in students' thinking and opinions and are designed to support interpretation and the co-construction of meaning through whole class conversation.
   b. Questions that do not seek information, are easily answered with specific facts or are answered easily with a yes/no response
   c. Questions with no "right" answer or has multiple correct answers
   d. ***Gold-star alternative: have students develop the authentic questions & post or bring to class with them.*** Once IRE classroom discourse has been disrupted and wait-time discourse has been established, have students prepare discussion questions prior to class meetings and write them on the board (or project them on the computer) to set

the direction for the discussion. Once the questions have been shared, proceed with steps 3 – 4.

   i. Student generated questions increase student motivation to participate and engage

3. **Wait for a student response (Wait Time 1).** Wait at least 3 – 5 seconds to demonstrate that the question is not rhetorical.
4. **Wait after the student response. (Wait Time 2).** Wait at least 3 – 5 seconds for another student to respond to the initial student response to emphasize that students are being asked to engage with one other's ideas and contributions (rather than the instructor always doing so).

Frequently Asked Questions

a. *How often should I use wait-time? W*e recommend using wait-time during any portion of class where questions are being asked and answered. Different types of courses will divide up class time differently between lecture, discussion, hands-on activities, etc.

b. *Is wait-time appropriate for all questions posed to the class?* Implementing wait-time can be difficult, as it requires the development of new habits and opens the door for more student-driven interactions in class. Until wait-time is your default mode of working, it's best to use it all the time to reinforce the habit, both for yourself and for the students. While there may be some instances where waiting is not required, it seems unlikely that a three second pause will cause problems.

c. *What do I do if the same student answers the questions every time?* Setting expectations for students and communication norms can help alleviate this challenge. Raising hands and calling on different students is one step. More hints can be found on the Facilitating Discussions Teaching Tool.

d. *What if students don't provide a response after the 3-5 seconds of delay, and instead there is uncomfortable silence? How long should I wait? What if it doesn't improve?* Different classroom dynamics can shape students' response to this technique. This simply requires patience and a willingness to keep trying. As the **gold star alternative** noted above, asking students to come prepared with their own questions, or using a small bit of discussion time to allow groups of students to devise discussion questions (see Rothstein & Santana, 2011 for more on this technique) can help jump start these discussions. If you have asked an authentic and difficult question, it might take students a few minutes to develop an appropriate response. In cases like these, you might anticipate the delay and work the questions into a Think, Pair, Share or Jigsaw activity (See other Teaching Tools in a Flash on these topics).

e. *Is there a better way to craft questions to demonstrate to students that the question is not rhetorical?* The key here is to avoid asking students to produce a response that matches some pre-determined answer. For example, an instructor could shift from asking questions of fact (e.g., "what are the five key factors that led to the Great Depression"), to asking students what they think, what they find most interesting or troubling or complex (e.g., "which of the factors leading to the Great Depression do you think played the biggest role, or was the hardest for people to bear, or could have been most easily avoided?"). Again, the instructor's role here shifts from merely evaluating each response to guiding the discussion away from casual opinions and toward engaged, evidence-based analysis and interpretation.

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