

Using "Think-Time" and "Wait-Time" Skillfully in the Classroom

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This handout discusses the effects of allowing time for student responses.

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.

The Concepts of "Wait-Time" and "Think-Time..."

The concept of "wait-time" as an instructional variable was invented by Mary Budd Rowe (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.

Recently, Stahl (1985) constructed the concept of "think-time," defined as a distinct period of uninterrupted silence by the teacher and all students so that they both can complete appropriate information processing tasks, feelings, oral responses, and actions. The label "think-time" is preferred over "wait-time" because of three reasons (Stahl 1990):

- It names the primary academic purpose and activity of this period of silence--to allow students and the teacher to complete on-task thinking.
- There are numerous places where periods of silence are as important as those "wait-time periods" reported in the research literature.
- There is at least one exception, labeled "impact pause-time," that allows for periods of less than 3 seconds of uninterrupted silence.

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 very 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.

Eight Categories of Periods of Silence.

The eight categories are 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 think-time.

(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. Conversely, extended periods of silence following imprecise questions tend to increase the confusion, heighten the frustration, and lead to no response at all.

(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 academic 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.

(5) Teacher Pause-Time.

Teacher pause-time, which occurs at a variety of places during a class period, is characterized by a 3 or more second period of uninterrupted silence that teachers deliberately take to consider what just took place, what the present situation is, and what their next statements or behaviors could and should be. One example of when the 3 seconds or longer of reflective thought would be beneficial for the teacher--and eventually students--after a student has asked a question that requires more than an immediate, short recall answer. Other examples are when students have asked for further clarifications, clearer explanations, or better examples than those already provided.

(6) Within-Teacher Presentation Pause-Time.

Within-teacher presentation pause-time occurs during lecture presentations or other extended information input periods, when teachers deliberately stop the flow of information and give students 3 or more seconds of uninterrupted silence to process the just-presented information. These pauses allow

students time to consolidate their thinking, with no request of them to follow with a public response. In effect, this period of silence provides students uninterrupted time to momentarily consider the information of the teacher's presentation in smaller, "bite-sized" chunks, rather than all at once.

(7) Student Task-Completion Work-Time.

Student task-completion work-time occurs when a period of 3-5 seconds; several (e.g. 15, 20, 30, or 90) seconds; or 2 or more minutes of uninterrupted silence is provided for students to remain on-task. This period allows students to complete a short or lengthy academic task that demands their undivided attention. Each period of uninterrupted silence should be appropriate to the length of time students need to complete the particular task.

(8) Impact Pause-Time.

Impact pause-time occurs when the most dramatic way to focus attention at a given time is to provide a period of uninterrupted silence. Impact pause-time may continue for less than 3 seconds or far longer periods, up through several minutes, depending upon the time needed for targeted cognitive or affective impacts. One example of a desired result is creation of a particular mood or affective environment, such as when sudden silence may generate a feeling or mood of anticipation, expectation, drama, suspense, or uncertainty. Another example is providing time for students to consider and internally respond to a rhetorical question before continuing with additional information or activity.

Skillful Use of Think-Time.

The 3 second period of uninterrupted silence is a minimal amount of time unless the teacher has sound reasons to reduce this time. There are few instructionally sound reasons for not allowing at least 3 seconds of silence. The teacher should deliberately and consistently wait in silence for 3-5 seconds or longer at particular times, described above. Further, the teacher should ensure that all students also preserve the disturbance-free silence so that both the students and teacher can consider and process relevant information and then act accordingly. When these behaviors occur, the teacher can claim to be skilled at using think-time. The skillful use of think-time contributes significantly to improved teaching and learning in the classroom.



Maintaining Classroom Discipline

Promoting Good Methods of Classroom Discipline

Helping students to govern their own behavior in ways that help them learn is a longstanding goal of all teachers. There are a number of ways that a teacher can promote good discipline in the classroom.

Know school guidelines for discipline procedures.

Be fair, positive and consistent. Be the kind of person young people can like and trust—firm, fair, friendly, courteous, enthusiastic and confident. Keep your sense of humor.

Provide a list of standards and consequences to parents and students. Make sure they are consistent with district and building policy. When in doubt, ask a colleague or your principal.

Keep your classroom orderly. Maintain a cheerful and attractive classroom rather than a disorderly one which might encourage disruptive behavior.

Get to know your students. Learn their names quickly and use them in and out of class. You will soon develop almost a sixth sense for anticipating trouble before it begins, but don't act as though you expect trouble or you will almost certainly encounter some.

Let the students know you care. Determine jointly with the class what is acceptable in terms of behavior and achievement and what is not.

Show interest in what students say, whether or not it pertains directly to the lesson.

Treat students with the same respect you expect from them; keep confidences.

Learn the meaning of terms, especially slang, used by students.

Begin class on time and in a businesslike manner.

Make learning fun. Make education interesting and relevant to the students' lives. Poor planning and a full curriculum can provoke disruptions.

Praise good work, good responses and good behavior.

Don't threaten or use sarcasm. Never use threats to enforce discipline. Never humiliate a child.

Avoid arguing with students. Discussions about class work are invaluable, but arguments can become emotional encounters.

Be mobile, moving around the room as students work or respond to instruction.

Keep your voice at a normal level. If "disaster" strikes and you trip over the wastebasket, don't be afraid to laugh.

Grade assignments and return them as soon as possible.

Give reasonable assignments. Don't use schoolwork as punishment. Give clear directions.

Keep rules simple. Establish as few classroom rules as possible, and keep them simple.

Discipline — The LEAST Approach.

There are several good methods of classroom discipline. One of the best is the **LEAST** Approach, developed by NEA, which helps you determine the appropriate level of involvement. If discipline problems can be handled at Step 1, there is no need to progress to Step 2, etc. Briefly, the **LEAST** Approach includes these steps:

•**Leave it alone.**

If the event is a brief and minor disturbance that is unlikely to occur again, leave it be.

•**End the action indirectly.**

When learning is disrupted or someone may get hurt, let the student(s) involved know you are aware of the inappropriate activity with a facial expression, a body gesture, or a quiet action such as walking toward the student(s) or calling the student(s)' name(s).

•**Attend more fully.**

Secure more information from the student on who, what, when, where and why. Be objective rather than emotional.

•**Spell out directions.**

When a situation threatens to get out of hand, making learning impossible or risking harm to someone, clearly explain to the student(s) involved the consequences of his/her actions and your intent to follow through.

•**Treat student progress.**

Record what happened, when, where, who was involved, what you did, and who witnessed the incident.

Handling Classroom Conflicts

Here are a few practical suggestions for dealing with an angry student in the classroom who is defying your authority and is out of control:

- Do not raise your voice.
- Try to remain calm and rational.
- Do not touch an agitated or angry student.
- Try to keep the student seated. In many instances, this is impossible. You can only suggest the student remain seated so that he might explain to you what is wrong.
- Be reassuring to the student as well as the rest of the class. Explain the importance of protecting every student's right to learn. Talk about options for resolving the conflict.
- Send another student for help. The student should be told to go to the nearest office to summon assistance from the administration.
- After the incident is over, immediately document everything that happened. This documentation should include time, name(s) of student(s) involved, a brief description of the events that occurred, and any information that pertains to the student(s) or the incident. This report should be submitted to the administration. You also should keep a copy in case of a future conference with parents or school administrators regarding the incident.

What if I “blow” it?

If you “blow” it, don't worry. Just re-evaluate your rules and policies, tell the class you're making some changes, and be consistent from then on.

Expect the unexpected.

Schedules will be changed without warning and unanticipated events will occur. Be flexible in responding to the unexpected; ask your colleagues for suggestions on how to deal with situations like the following.

What will you do if:

- a student tells you her pet died?
- a student tells you she is pregnant?
- a child wets his pants?
- a student is verbally abusive?
- a parent is angry and unreasonable?
- a student refuses to do what you ask?
- you have no textbooks?
- a student falls asleep?
- a student cuts her head falling out of her desk?
- you are called to the office in the middle of class?

- non-English speaking students are assigned to your class?
- a student has a seizure or goes into a coma?

Be fair to your students.

Here are some ways to help you win the respect of your students:

- Be consistent in application of discipline and just in your requirements and assignments.
- Don't refuse to let a student tell you his or her side of the situation. Be willing to consider mitigating circumstances.
- Don't talk about the misdeeds of students except to those who have a right to know. Don't openly compare one pupil to another.
- Apologize if you've treated a student unjustly.
- Make sure punishments are appropriate for the misbehavior, and explain to the student why he or she is being punished.

GUIDELINES FOR EFFECTIVE PRAISE

(Applies primarily to praise associated with instruction and student performance)

Effective Praise	Ineffective Praise
1. Is delivered contingently upon student performance of desirable behaviors or genuine accomplishment	1. Is delivered randomly and indiscriminately without specific attention to genuine accomplishment
2. Specifies the praiseworthy aspects of the student's accomplishments	2. Is general or global, not specifying the success.
3. Is expressed sincerely, showing spontaneity, variety and other non-verbal signs of credibility.	3. Is expressed blandly without feeling or animation, and relying on stock, perfunctory phrases.
4. Is given for genuine effort, progress, or accomplishment which are judged according to standards appropriate to individuals.	4. Is given based on comparisons with others and without regard to the effort expended or significance of the accomplishment of an individual.
5. Provides information to students about their competence or the value of their accomplishments.	5. Provides no meaningful information to the students about their accomplishments.
6. Helps students to better appreciate their thinking, problem-solving and performance.	6. Orients students toward comparing themselves with others.
7. Attributes student success to effort and ability, implying that similar successes can be expected in the future.	7. Attributes student success to ability alone or to external factors such as luck or easy task.
8. Encourages students to appreciate their accomplishments for the effort they expend and their personal gratification.	8. Encourages students to succeed for external reasons -- to please the teacher, win a competition or reward, etc.

Transition Songs

Try one of these songs to capture children's attention and to guide them from one activity to the next.

Clean up the room with these tunes:

A HELPER I WILL BE (Tune: The Farmer in the Dell)

A helper I will be. A helper I will be.
There's work to do, there's work to do.
A helper I will be.

A picker-ip I'll be. A picker-up I'll be.
It's time to put the toys away.
A picker-ip I'll be.

THIS IS THE WAY (Tune: Mulberry Bush)

This is the way we clean up our room,
Clean up our room, clean up our room.
This is the way we clean up our room
At school every day.

(Change the words to "put on our coats", or "lay down to rest", or any command you want the children to follow).

CAN YOU? (Tune: Skip to My Lou)

I can clean quietly how about you?
I can clean quietly how about you?
I can clean quietly how about you?
How about you my darlin'?

(Change words to "push my chair", "pick up trash", "walk quietly", etc.).

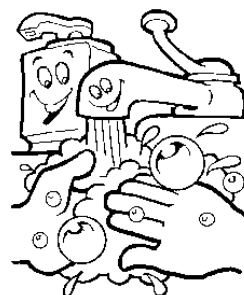
TIDY UP (Tune Jingle Bells)

Tidy up, tidy up, put the toys away,
Tidy up, tidy up, we're finished for today.
Tidy up, tidy up, put the toys away,
For we'll get them out again the next time that we play.

Here is a song to sing when the children wash their hands:

HANDY GAME (Tune: Row Your Boat)

Wash, wash, wash your hands,
Play the handy game.
Rub and scrub and scrub and rub,
Germs go down the drain.



Sing these songs to get the children's attention before an activity:

LISTENING (Tune: Frère Jacques)

Are you listening, are you listening,
Boys and girls, boys and girls?
It is time to listen. It is time to listen,
Boys and girls, boys and girls.

(Teach the children to sing the second line, "Yes, we are. Yes, we are.").



WHO IS READY? (Tune: The Bear Went Over the Mountain)

(child's name) is ready.
(child's name) is ready.
(child's name) is ready.
To go out and play.

(Reinforce children who are doing the right thing by singing their names).

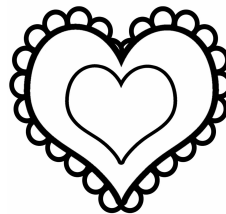
LOOK AT ME (Tune: If You're Happy and You Know It)

If you're ready for a snack look at me.
If you're ready for a snack look at me.
If you're ready and you know it then your face will surely show it.
If you're ready for a snack look at me.

(Change the words to fit what you want the children to do, such as "If you want to hear a story sit down please", or "If you want to go outside line up at the door").

I LOVE SOMEBODY (Tune: Farmer in the Dell)

I love somebody, I do.
I love somebody, I do.
I love somebody,
And I'll tell you who.



(Find a child doing the correct thing and say their name).

TWO LITTLE HANDS (Finger Play)

Two little hands, clap, clap, clap.
Two little feet, Tap, tap, tap.
Two little hands, thump, thump, thump.
Two little feet, jump, jump, jump.
One little body turns around.
One little child sits quietly down.