

Teaching Tips: Six Common Non-Facilitating Teaching Behaviors

Many instructors unwittingly behave in ways which not only frustrate their own goals, but also actively discourage significant (as opposed to rote) student learning. The relationship between teachers' behaviors as perceived by their students and the quality and quantity of students' learning, motivation, and student-teacher communication is amply documented in the research literature (Amidon & Hough, 1967; Flanders, 1970). In this author's experience observing teachers' behaviors in elementary, secondary and university classrooms, both in person and on videotape, certain non-facilitating behaviors have become vivid through their very repetition.

At issue is the relationship between intent and actions: what teachers do and how they do it delivers more of an impact than what they say. Within the body of this paper, six common non-facilitating teacher behaviors will be defined, exemplified, and discussed.

1) Insufficient "Wait-Time"

"Wait-time" is the amount of time after an initial question has been posed before the teacher answers it, repeats, rephrases, or adds further information to the question; or accepts an answer from a student.

More than just a few seconds are necessary for mental information-processing (Moriber, 1971; Rowe, 1974). When the teacher becomes a nonstop talker, filling every possible silence with his voice, what chance do students have to think over what is being said, formulate intelligent responses, or ask for clarification.

Mental information-processing may be accompanied by verbal analyses or proceed in silence. It does seem logical, therefore, that if the facilitation of students' learning is of paramount importance, then teachers should allow for individual differences in learning style by providing a modicum of quiet time for thinking as well as opportunities for verbal responses.

Students who note that their instructor answers a preponderance of his own questions without waiting for a response soon grow dependent upon the teacher to do their thinking for them. In like manner, an answer too rapidly accepted has the effect of cutting off further information-processing and analysis by the rest of the class. Instructors may attest verbally to their aim of encouraging independent thinking, but unless they consciously work to expand their wait-time, they will have rhetoric with little resultant change in behavior.

Rowe (1974) reported that when teachers were trained to increase their wait-time from one second to 3-5 seconds, several changes occurred in students' behavior: the length and number of unsolicited but appropriate responses increased, the number of failures to respond decreased, and the incidence of student-to-student comparisons of data increased. Instructors who are interested in repeating this experiment in their own classrooms can measure their wait-times ("one, one-thousand; two, one-thousand," etc., sufficing for timing purposes) and then deliberately expand these periods of silence-for-thinking both after a question is posed and after an answer has been given.

Sharing the concept of wait-time for thinking with the students often enables the teacher to maximize his efforts and gives the class an insight into learning skills.

2) The Rapid-Reward

Consider the effect on students' processing of information and analysis of data when an instructor says immediately to the first respondent to his question: "Right, good." As if to assure that further thinking will be terminated, the teacher either proceeds to re-word, repeat, and exemplify the answer, or goes on to the next topic. Learning being a highly individual process, people learn at different rates and in varying ways. Rapid acceptance of a correct answer favors the faster thinker/speaker who has completed his thought processes; those in mid-thought have their answers terminated prematurely.

A variation on this theme is the softly-voiced, hesitant answer of the student seated nearest the instructor. Because many students commonly respond softly to the teacher if he is within close proximity, an awareness of the consequences of this behavior is crucial. Many a student seated out of earshot has become frustrated, bewildered, or disinterested when a

softly-voiced, difficult-to-hear answer is rapidly rewarded. To ameliorate this situation, encourage student-to-student dialogue, discussion, and peer critiquing of ideas. The following are suggested: extended silent time after an answer is offered; a questioning glance around at other students, tacitly requesting comment; a question to those in the rear, "What is your analysis of what was just said?" and, most important, physical movement of the teacher from place to place about the room in order that as many students as possible enjoy close proximity to the instructor, or "front row seats," at one time or another during the class.

3) The Programmed Answer

The following are examples taken verbatim from classroom dialogues and best exemplify this third non-facilitating teaching behavior.

- "What are some of the enemies of the praying mantis? Cats kill them, don't they? How about other animals? Or insects?"
- "What reasons do you have to use that formula? Was it suggested in the homework chapter? Had you ever used it before? Or seen it used in this context?"
- "What happens when we add the sums of the rows? Do we get skewed results?"
- "Look at this shrub and tell me, what observations can you make? Do you see the dead stems? Are they damaged from insect feeding?"

The programmed answer not only deprives the respondent of expressing his own thoughts by steering him toward the answers that the questioner expects, but also conveys the message that there is really little interest in what he thinks or says. While the reasons offered by those who make a practice of this pattern are usually altruistic (i.e., "Silence after the posing of a question is embarrassing to the student," "I feel impelled to help out by suggesting clues"), one needs to ask oneself honestly: "Is it I or the student who is uncomfortable after a second or two of silence?"; "Do I have confidence in the students' ability to think about the question and formulate a response?"; and, more importantly, "Am I interested in what the student has to say, or in determining which of my answers he prefers?" While programming can be an effective tool when one desires to guide students' thinking, suggest possibilities, or model logical thought processes, it is important to be aware of its limiting effect in opening up a wide variety of possible ideas. It is via the latter route that an instructor can demonstrate his interest in the students' ideas and himself model inquisitive learning behavior. A willingness to listen helps to create in the classroom a community of learners in place of an authoritative, superior-subordinate relationship between teacher and class.

4) Non-Specific Feedback Questions

Many instructors feel justified in assuming that their students have no questions if no one responds when they ask, "Are there any questions? Do you all understand?" Purportedly designed to give the instructor information as to the clarity and comprehensibility of his presentation, these questions usually fail to solicit feedback. Why? We can isolate several possibilities, two of which are the nature of students and the nature of the questions.

What type of student will bravely call attention to his own ignorance when the question is posed to a class: "Does everyone understand?" Interestingly enough, it was a student who suggested that those who do respond comprehend most of the concept, lesson, problem, etc., and need only a minor point made clear. Others, whose lack of understanding is more comprehensive, whose confusion is more widespread, may be too intimidated to call attention in such a public way to their situation. Often, the latter are so confused that they cannot think of questions to ask. Yet these are the students who most need assistance. How can instructors determine what it is they do and do not understand?

Contrast the following pairs of questions:

- A. "Does anybody have any questions?"
- B. "Let's think of some other examples now of situations in which this principle is applicable."

- A. "Does everybody see how I got this answer?"
- B. "Why did I substitute the value of x in this equation?"

- A. "Who wants me to go over this explanation again?"
- B. "What conclusions can we generalize from this specific graph?"

You need to ask yourself, "What do students need to say or do for me to determine the extent of their understanding?" You can then formulate and pose one or several specific questions, which will give a more comprehensive sounding of the class's problems, and questions.

5) The Teacher's Ego-Stroking and Classroom Climate

Think of the effects on students' willingness to respond to teacher-posed questions when statements such as the following are made:

- "Since I have explained this several times already, you all should know what is the effect of an increased demand upon this supply curve."
- "Obviously, when you use this formula you'll get...?"
- (After having listened to several students' answers) "The real answer is this:"
- "Does everybody understand the explanation I just gave? It should be clear by now."
- "O.K. Now rephrase your answer the way you think I would say it."

Students need to feel that it is psychologically "safe" to participate, to try out ideas, to be wrong as well as right. Your behavior is an important determinant in the establishment of a safe or comfortable climate. Learning, an active process, requires that the learner interact with ideas and materials. Constant teacher-talk, feeling compelled to comment on each student idea, deciding to be the final arbiter in decision-making processes, interrupting, controlling, and intimidating either through expertise, or the threat of grades - these are but some of the behaviors which prevent students from engaging in the active processes needed for significant (as distinguished from "rote") learning to take place. It is interesting to note the increased levels of student participation when instructors do not conceal the fact of their ignorance, when they sometimes hesitate about certain questions or information, when their responses are dictated more by an honest desire to assist the students than to demonstrate the extent of their own knowledge.

A few of the possible behaviors which can encourage the establishment of an environment conducive to participation are:

- Remembering and referring to students' ideas
- Yielding to class members during a discussion
- Acknowledging one's own fallibility
- Framing open-ended questions which allow expressions of opinion and personal interpretations of data
- Accepting the students' right to be wrong as well as correct
- Encouraging joint determinations of goals and procedures when feasible (e.g., "How can I help you best to learn this material?")
- Sharing the responsibility for learning with the learners (i.e., permitting students to answer their peers' questions)
- Freeing oneself from the burden of thinking that students cannot learn elsewhere what isn't covered in class
- Encouraging group presentations of the material to be covered
- Soliciting student participation in their own learning assessment such as developing test questions and jointly correcting examinations

6) Fixation at a Low Level of Questioning

Bloom (1956) has postulated that cognition operates on ascending levels of complexity. One begins with knowledge, or informational details, and moves upward through comprehension, analysis, and synthesis to evaluation. Questioning can be a central feature in promoting the development of conceptual abilities, analytical techniques, and the synthesis of ideas. Skillful teachers use questions to guide thinking as well as to test for comprehension. Too often, however, as illustrated by this sixth recurring pattern, teachers' questions become fixated at the informational level, requiring of students only that they recall bits and pieces of rote-memorized data: informational-level questions. For example, asking, "What is the formula for finding the force between two charges?" or "What is the definition of 'quantity demanded?'"

One-word or short-phrase answers, those capable of being sung out in unison, constitute the preponderance of question-and-answer dialogues in many classrooms and necessitate little interrelating of material, sequencing of thoughts, or analyzing of data. While a solid base of factual information in learning is clearly important, fixating students' thinking at this level discourages the development of more complex intellectual skills. Questions can encourage the students to use informational knowledge to analyze concepts, synthesize complex relationships, and evaluate the new data. For instance, ask, "What would happen if we inserted a metal conductor in between the moving charge and the current?" or "Why must the information in Table One change when we consider these new data?"

Being conscious of the levels of questions one is asking and attempting to structure the questions toward analysis, synthesis, and evaluation can do much to combat fixation at the informational level of thinking.

Conclusion

If asked to formulate the goals of the educational process, most teachers would include the nourishment of intellectual curiosity, encouragement of independent learners, and development of more complex thinking processes. Yet instructors' behaviors such as the six described in this paper militate against the achievement of these goals.

Those who sincerely desire to examine and analyze their own teaching behaviors face a problem - the evanescence and multi-dimensional aspects of the teaching-learning relationship. Capturing the classroom behaviors of teachers and students on closed-circuit television with instant-replay features offers one solution. Utilizing such criteria as the six patterns described in this paper - insufficient wait-time, the rapid-reward, the programmed answer, non-specific feedback questions, the teacher's ego-stroking and classroom climate, and fixation at a low-level of questioning - teachers can analyze their own behaviors and examine the effects of their actions on student learning. Such self-analysis can be the beginning of behavioral change.