TWELVE WAYS OF FINDING OUT WHAT ALL YOUR STUDENTS KNOW

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No doubt the most frequently used strategy for delivering information to college students is the lecture. Unfortunately, listening to a talk, students are attending to what is being said only forty percent of the time (Pollio, l984). Since traditional lecturing is a one-way communication in which the student is a passive participant, instructors must utilize strategies to get students more actively involved. Numerous authors (Davis, 1993; Lowman, 1995; Menges & Weimer, 1996; Meyers & Jones, 1993; Miller & Miller, 1997; Weimer, 1990) have indicated that students learn best when they take an active role. Bonwell & Eison (1991) noted that one obstacle for faculty using active learning strategies is the amount of class time it takes. While active learning strategies reduce the amount of available time that could be devoted to content coverage, the author believes the following twelve strategies could be utilized with a minimum of lost time:

1. Neighbors
2. Choral
3. Thumbs
4. Fingers
5. Slates
6. Heads Together (Cooperative Learning)
7. Body Movement
8. Response Cards
9. Write Down
10. Call on one student; other students agree/disagree
11. Rods/Tiles
12. Do It

Since student concentration during a lecture has been shown to decline after ten to fifteen minutes (Stuart & Rutherford, 1978), the author feels a lecture could be enhanced by inserting one of the twelve strategies approximately

every fifteen minutes. The following information is offered to assist the reader in understanding each strategy:

Neighbors - Students are asked to turn to the person sitting closest to them and orally explain. For example, a professor could say, "Take a moment and reflect on some of the main concepts I have presented. Now turn to a neighbor and see if you can explain them to someone close by." So that no one student in the dyad dominates the talk time, the instructor may want to provide an equivalent amount of time in each direction.

Choral - Students as a group are directed to provide an answer in unison. Naturally, this strategy works best when the answer is quite short. For example, a Botany professor might say, "Think what we call the movement of a part of a plant toward or away from light sources. Let's all say it together." Then students would say "phototropism" out loud together.

Thumbs - Students would respond to questions by putting their thumbs up or down. After lecturing for approximately fifteen minutes, an English professor might say, "Show me with your thumbs, by putting them up or down, if the protagonist in our book would have concurred with these ideas. If you're not sure, put your thumb to the side."

Fingers - Students hold up their fingers to indicate their choice among a variety of choices. For example, a Psychology professor could say, "Of the five theories I've presented thus far, which theory best supports Freud's work? Show me with your fingers. I've numbered each theory on the board."

Slates - Each student is handed a small slate with chalk and eraser and asked to respond to queries from the professor. For example, a Mathematics instructor could say, "Differentiate this next problem on your slate and hold up your solution when you are finished."

Heads Together (Cooperative Learning) - Students are put in teams of four and then numbered off. The instructor asks a question and then randomly calls a number from one to four. Only the student with that number from each team is allowed to answer the question. For example, a Physics professor might say, "Make sure everyone on your team can explain Ohm's law." In this strategy, the students with the greatest understanding for this law will be assisting their colleagues who have less understanding. Students will desire to help each other so that their team looks bright.

Body Movement - Students are asked to make a certain move with their body to indicate their choice. For example, a Kinesiology instructor might say,

"Please stand if you think you would be using more flexor muscles in this activity. Remain seated if you think more extensor muscles would be used in this activity."

Response Cards - Students fold a five by eight card in half and are asked to place certain presented material on the card. After the instructor asks a question, students indicate their response by pinching on the card next to the answer they desire. For example, an English teacher might have students place a variety of punctuation marks on their response cards and then say,"Take a look at this sentence and be ready to tell me what punctuation mark would occur here. Show me on your response card by pinching which one you think it is."

Write Down - After a brief lecture, students are asked to write down an answer to a certain question. For example, a Business professor could say, "Compare the ways a consumer and producer could effect the bottom line costs. Write out an answer and I'll come by and read your ideas."

Call on one student; other students agree/disagree - The professor asks a question in class and hands are raised. Before calling on one raised hand, the professor indicates he would like the students not called on to show with their thumbs if they agree or disagree with what the student who is called on has to say. For example, an Engineering professor might say, "How could this problem be solved without using vector analysis? Since there are only a few hands up right now, please listen to the person I call on and I'd like the rest of you to show me with your thumbs if you agree or disagree with your colleague after they finish speaking."

Rods/Tiles - Certain fields of study have manipulatives to indicate a student's answer. For example, in certain Education classes, students are asked to manipulate Cuisenaire rods to indicate an answer to a specific problem.

Do It - A number of disciplines require the student to demonstrate the skill within the class. For example, a Dance instructor might say, "Everyone, show me the third position in ballet."

It has been the author's experience that the above twelve strategies can be quickly inserted in any lecture with little disruption, thus uncovering what all of your students are learning.

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