SeeMeTeach® Teacher Challenge

Increasing Student Engagement (Whole Class) Using Powerful Methods of Instruction

SeeMeTeach® Teacher Observation Reimagined

SMT Teacher Challenge
Increasing Student Engagement (Whole Class)
Using Powerful Methods of Instruction

S Code Focus on Generally Increasing the Number of Students Responding

Suggested uses for this *Teacher Challenge* include the following subcategories:

- Class discussion
- Class Review
- Lecture
- Taking notes

The minimal required training to complete this challenge includes:

- Training 1: Setting up a lesson observation in SMT
- Training 2: Qualitative Comments Mode
- Training 3: Quantitative Data and Analysis Mode
- Training 5: Student Actions and Engagement – (S Codes 1-9)

Data collection should focus on L codes and S1-S9 codes utilizing the seating chart. Demographics should be designated for this Teacher Challenge as well.

Introduction

With students present in the classroom, the teacher can teach. However, students may not be physically or mentally engaged, so learning may not occur. When a classroom is more teacher-centered, students realize they will not likely get called on and will not have to respond; they learn to tread water passively and become one of the many quiet, non-contributing, and probably non-engaged students in the class.

Unfortunately, a teacher's default stance assumes students are engaged and learning. While optimism might cause one to conclude that ALL students who are present and awake are engaged, studies have shown that they are not. In a normal setting, 30% of people daydream. And surveys of students indicate that when teachers ask questions, up to 60% of students are not even thinking of an answer. Some of the observable indicators of students who are engaged versus not engaged are listed below.

Indicators of students who are engaged	Indicators of students who are not engaged
• Respond to questions. • Ask the teacher or other students questions. • Make comments to the teacher or other students. • Engage in physical manipulation of objects or creating products.	• Respond with "Could you repeat the question?" (Indicating that they were not listening the first time it was said.) • Respond with "I don't know." • Have their head down on their desk.

The Challenge

This *Teacher Challenge* includes changing a lesson strategy or teaching model to foster increased opportunities for student engagement in a whole class setting.

Challenge Steps

1) **Teach a Lesson**: First, capture the video and audio of the lesson. Make sure to teach the lesson as you normally would, as this lesson will be used for your baseline data.
2) **Complete the Required SMT Training:** If not already done, complete the required training to learn how to collect the specific data required for this challenge. The minimal required training recommended includes:
    a. Training 1: Setting up a lesson observation in SMT
    b. Training 2: Qualitative Comments Mode
    c. Training 3: Quantitative Data and Analysis Mode
    d. Training 5: Student Actions and Engagement – (S Codes 1-9)

Note: The cheat sheets accompanying these trainings provide an excellent summary of the training and are excellent resources to keep on hand while you code your recorded lessons.

3) **Collect Data**: Use the SMT teacher observation app to collect baseline data specifically focusing on student engagement.
4) **Document and Analyze Data**: After you have collected your baseline data, plot the pertinent data on the *Data Summary and Change Chart*.

Note: See the Suggestions for Analyzing Data section in this teacher challenge for additional suggestions on analyzing your specific data.

5) **Revamp Your Teaching:** Implement one change to how you approach student engagement in your classroom. It is recommended to:
    a. Only implement one change or one strategy at a time to determine what is making the difference in student engagement.
    b. Fill out the "My Plan of Action" google form to document your observations and progress through this teacher challenge. This can be used for your personal development or as evidence for a yearly observation or pre-service teacher certification program.

Note: See the Implementing Growth and Change section in this Teacher Challenge for additional suggestions on how to implement specific changes to your teaching.

6) **Repeat Challenge Steps 1, 3, 4, and perhaps 5:** One cycle through this process might achieve the desired results, but more than likely, it might take more than one cycle. Teaching is complex, with many

variables in play, but know that sometimes a very small change can have a noticeable and sometimes very large effect on the learner or the learning environment.

Data Summary and Change Chart

Date				
Numerical Data	**1st Observation**	**2nd Observation**	**3rd Observation**	**4th Observation**
S Codes Time				
Code Summary: S total time %				
Total Time for S Codes				
St. Engage Sum: S1-S5 # Events				
St. Engage Sum: S1-S5 Time				
St. Engage Sum: S6-S9 # Events				
St. Engage Sum: *S6-S9 Time*				
St. Engage Sum: S1-S9 Time				
St. Engage Sum: S1-S9 # Events				
Student Engagement Index				
Calculate (see below)				
Student Events per Minute				
Calculate (see below)				
Student to Student Data				
Interaction Patterns: S-S #				
Code Summary: S2 (Student asks another student a question)				
Code Summary: S4 (Student comments to another student)				

Equitable Contributions - (General observations of trends and patterns) Data can be pulled from *Seating Chart Heat Map* and/or *Demographics*

Observation 1	
Observation 2	
Observation 3	
Observation 4	

Distribution of Student Actions – (General observations of trends and patterns) Data can be pulled from *Teacher Actions Plus* or *Student Engagement Summary*

Observation 1	
Observation 2	
Observation 3	
Observation 4	

Questions and Data to Ponder Regarding Student Actions

- What is the quantity and type of student engagement in the lesson, and at what level are students engaged as discernable by the observer beyond the passive participant?
    - Describe and report student engagement in the form of questions asked, answered, comments made, or the number of opportunities provided to show what they understand, learned and exhibited during the lesson.
- How did the lesson foster student-student interactions, or what might be changed to foster more?
- What did the *Seating Chart Heat Map* show regarding equity of student engagement?

Suggestions for Analyzing Data

Examine Student Talk

- Using data from *Code Summary* or the Student Engagement Summary, examine the events and time related to S codes S1-S5 (students' individual actions).
- Using data from *Code Summary* or the Student Engagement Summary, examine the events and time related to S6-S9 (whole group actions).
- Use *Interaction Patterns* and the S-S # to check how many students responded to each other at least once and what you might change to produce more student-to-student interactions.

Examine the Distribution of Student Actions

- Use *Teacher Action Plus* to look at the timeline for S1-S9 events that would also indicate student engagement. Are the S code events equally distributed along the timeline, or are they clumped at the end of the notes? (Somewhat equally dispersed S codes indicate many checks for understanding.)
- Use *Student Engagement Summary* to consider the distribution across the lesson. Look at the various parts of the class or type of lesson segment and determine if or how students were engaged, as evidenced by vertical bars. Think about parts of the lesson absent of student contributions and engagement and how your lesson might be altered to produce more student engagement.

Examine Equitable Student Engagement

- Use the *Seating Chart Heat Map* to consider how many students responded to at least one question and how many were not part of the conversation. Use the *Demographic* toggles on the Heat Map to examine student engagement by gender, minority, ELL, and SPED demographics. Think about what the data suggests in terms of equity regarding student engagement.

Calculate Engagement Indexes

Calculate Engagements Per Student: To determine the average number of engagement events per student, use *Code Summary* for the numbers. Calculate the index by using (1 point for each of S1-S5 events) plus (1 point for each of the S6-S9 events x the number of students in the entire class).

Example: Since S1-S5 represent only one student contribution, tally up all the S1-S5 events noted during the observation. Let us say there were 15 such events. Since S6-S9 represents whole group responses, each S6-S9 event is multiplied by the number of students in class. Let's say there are 30 students in class, and there was one S6 event, one S7, and two S9 events, so there were four events x 30 students = 120.

- S1-S5 = 15 individual events
- S6-S9 - 4 events x 30 students = 120 individuals within group

Total events/# of students = 135/30
Average per student = **4.5 Engagements Per Student Index**

Calculate Student Events Per Minute of Class: This calculation indicates the frequency of student actions and whether they are close or spread apart. To calculate, use data in *Code Summary* and add the number of S1-S5 events to the number of S6-S9 events and divide by the number of minutes in class.

Example: Each number next to S1-S9 represents the number of events for each type of S code. Simply tallying these numbers and dividing them by the number of minutes in the lesson will result in the average number of S events per minute of class.

- S1-S5 = 15 individual events
- S6-S9 = 4 events

Total Events = 19 events

# of events/ # of minutes of class= 19/40
Average **= .475 S Events Per Minute Index**

Implementing Change and Growth

Guiding Thoughts: Lessons vary, and so do the possibilities for optimizing student engagement. However, there are many things to consider when modifying the learning environment to allow for the potential to increase student engagement.

1. Cold calling students! Don't be afraid to randomly call on students. The surprise element will help keep them on their toes and more apt to pay attention if they know they may be called on randomly instead of relying on the students who normally answer.
    a. Write all of your students' names on popsicle sticks and draw a stick at random to have a student answer the question.
    b. Number each desk in your room. The student sitting at the desk with the number you called has to answer the question.

2. Don't take "I don't know" as an answer. If students know they can say "I don't know" and be done with it, most of them will try to take the easy way out. Create an expectation in the classroom where students must attempt to answer the question. If a student says, "I don't know," you could respond with:
    a. "Well, give me your best guess."
    b. "I don't know is not an option here, so why don't you try again."
    c. Have them rephrase what they have learned already and then ask them to pull bits of information out of the summary that pertains to the question being asked.
    d. Incorporate manipulatives and have students summarize what they are experiencing.
    e. For those students who may be too shy or timid to speak in front of the group, strategies like Think-Pair-Share are a great way to get all students engaged and feeling more confident since they have a buddy to bounce ideas off of before sharing with the group. This is also a great way to break up lectures or notes.

3. Exit slips are a great way to get students to summarize what they learned at the end of a lesson and ask any questions they may still have. It also gives the teacher great feedback that can easily be scanned in about 5 minutes or less. An easy layout is the 3-2-1 exit slip, where the students list 3 concepts they learned, 2 questions they still have, and 1 concept they want to learn more about. You can also have them add in a comprehension scale where they rate their level of comprehension of the material on a scale of 1-5. 5 means they could teach it to the next class, 3 means they understand but need a little more practice and 1 means that they didn't understand the lesson at all.

4. For class reviews, a great way to get all students engaged (and off their phones) is to use a Two-Line review session. First, each student makes 5 flashcards on notecards using information about the specific chapter or content. The question goes on the front, and the answer goes on the back. The students then line up in two lines facing each other, so each student has a study partner. The teacher says, "Go!" The students begin quizzing their study partners using flashcards. Once all of the pairs are done (or after a few minutes), the teacher says, "Switch!" and one line of students (the teacher has to designate which one) moves one student to the right, thereby creating new sets of study partners. The student on the end who steps out past the line has to run around to the back of the line to their new partner. Then the teacher says, "Go!" The new pairs of students begin to quiz each other. This repeats until the students reach their original partners. This review gets every student engaged, gets them out of their desks, and gets them moving.

5. Use digital response systems such as Pear Deck or Kahoot to engage every student.
    a. Some of these platforms offer subscriptions that provide you with a data analysis of each session, allowing you to see which students got what questions wrong.

6. Utilize whiteboards to get every student to answer every question asked.
    a. See *Module 3* below for more information.

7. Choose an engaging strategy. The strategy at the lesson's core can provide numerous opportunities for all students to be engaged. Choosing a particular strategy or model that fosters student engagement is an important first step in constructing a lesson. For teaching science, some strategies or models that have proven effective at helping students engage with science concepts include:
    a. The 5 E's strategy
    b. The Learning Cycle (a forerunner to the 5 E's)

c. Structured Controversy
d. Issues Analysis
e. Dialogues
f. Problem-Based Learning

Modules That May Help Modify Instruction and Specific Interventions to Increase Checks for Understanding

See the following modules on the SMT website for teaching tips and strategies that may engage more learners during the lesson.

- Module 1: The Teacher Decision-making Framework - Understanding the teacher-student synergistic relationship and how the critical decisions work together for the targeted outcomes of instruction.
- Module 2: Identifying Teacher Actions: Asking questions that dig into student thinking; Asking questions, and responding in ways that result in more student-student interactions
- Module 3: Maximizing Student Engagement in the Classroom - Using whole-group response tools and strategies to learn about students' understanding and provide maximum feedback to the teacher.