

Student:

L = Listening to instructor/taking notes, etc.

Ind = Individual thinking/problem solving. Only mark when an instructor explicitly asks students to think about a question/problem on their own.

Qdisc = Discuss question in groups of 2 or more students

GW = Working in groups on activity

AnQ = Student answering a question posed by the instructor with rest of class listening

SQ = Student asks question

CIDisc = Engaged in whole class discussion by offering explanations, opinion, judgment, etc. to whole class, often facilitated by instructor

Pred = Making a prediction about the outcome of demo or experiment

SP = Presentation by student(s)

TQ = Test/Quiz;

W = Waiting (instructor late, working on fixing AV problems, instructor otherwise occupied, etc.)

Instructor:

Lec = Lecturing (presenting content, deriving mathematical results, presenting a problem solution, etc.)

RtW = Real-time writing on board, doc. projector, etc. (often checked off along with Lec)

Fup = Follow-up/feedback on question or activity to entire class

PQ = Posing question to students (non-rhetorical)

I = Implicit (explain process of deriving answer)

E = Explicit (Factual answer: True/False, multiple choice)

P = Polling (whole class answers simultaneously)

O = Open ("any questions?")

AQ = Listening to and answering student questions with entire class listening

MG = Moving through class guiding ongoing student work during active learning task

1o1 = One-on-one extended discussion with one or a few individuals, not paying attention to the rest of the class (can be along with MG or AQ)

D/V = Showing or conducting a demo, experiment, simulation, video, or animation

Adm = Administration (assign homework, return tests, etc.)

W = Waiting when there is an opportunity for an instructor to be interacting with or observing/listening to student or group activities and the instructor is not doing so

Modified from: Smith MK, Jones FHM, Gilbert SL, and Wieman CE. 2013. The Classroom Observation Protocol for Undergraduate STEM (COPUS): a New Instrument to Characterize University STEM Classroom Practices. CBE-Life Sciences Education, Vol 12(4), pp. 618-627