

## OBSERVATION PROTOCOL FOR ACTIVE LEARNING (OPAL)

Instructor codes
Course Administration Codes

- **Ad<sub>c</sub>**—General course administration (the instructor is giving students important reminders, dates, announcements, taking attendance, setting up A/V, returning work, etc.)
- **Ad<sub>t</sub>**—The instructor is doing Test/Quiz administration for the class
- **FP**—The instructor is facilitating student presentations

Content Delivery Codes

- **Lec**—Lecturing; talking to the students and not using any visuals or demonstration equipment. Lec could also be marked if instructor has stopped using pre-made or handwritten visuals for more than one minute while still lecturing.
- **Lpv**—Lecture with pre-made visuals; talking to students while using visual aids that were made prior to the start of class (e.g. slides; pre-written chalkboard notes, etc.). Mark only when visuals are directly *referenced*; not when visuals are up but are not being used.
- **LHV**—Lecture with handwritten visuals. Instructor is talking to students while actively writing on board/projector/etc. or referencing previously written visuals from earlier in the same class session.
- **Lint**—Interactive lecturing; talking to students while asking multiple, interrelated questions in order to examine a complex problem, idea, issue, figure, or experiment (to name a few examples). Instructor integrates student answers into the lecture. Might take a few minutes to understand that Lint is occurring rather than PQ→AnQ, or be coded retroactively. Count number of questions and answers in the PQv and student AnQ codes.

Pedagogical Style Codes

- **MG<sub>t</sub>**—Instructor is physically moving through class while lecturing or during an activity, guiding ongoing student work or asking/answering questions.
- **AA**—Acting/Animation. Instructor acting out a concept using their body
- **ChQ**—Comprehension question. Ex. “Does anyone have questions?” or “Does that make sense?” (count number of times)
- **AnQ**—Listening to and answering student questions with entire class listening (count number of times)

Teaching Activities Codes

- **Ad<sub>a</sub>**—Administration of activity or task (e.g. giving instructions, time left to complete activity, etc.)
- **FD**—Facilitate discussion. Instructor facilitating a whole class discussion, where whole class is engaged (i.e. students not discussing in small groups)
- **PQv**—Posing question to whole class regarding course content verbally (non-rhetorical). PQv’s tend to be quick interactions where no explicit time is given to students to think, discuss, or problem solve. Student codes frequently marked in response to PQ include AnQ, GrA, V<sub>H</sub>, or V<sub>T</sub>. (count number of times)
- **PQb**—Posing question to whole class regarding course content by displaying that question on the board, on PowerPoint, etc. (non-rhetorical). PQb’s tend to be quick interactions where no explicit time is given to students to think, discuss, or problem solve. Student codes frequently marked in response to PQ include AnQ, GrA, V<sub>H</sub>, or V<sub>T</sub> (count number of times)
- **PSw**—The instructor presents a problem solving activity/task presented on a worksheet for students to complete. This could be a writing assignment, drawing assignment, problem solving activity, etc. PSw’s tend to be longer than a simple PQ; students are given time to think, discuss, or problem solve before arriving at their answer. Student codes frequently marked in response to PS include Ind, WR, QG, or WG.
- **PSb**—The instructor presents a problem solving activity/task presented on board or PowerPoint for students to complete. PSb’s tend to be longer than a simple PQ; students are given time to think, discuss, or problem solve before arriving at their answer. Student codes frequently marked in response to PS include Ind, WR, QG, or WG.
- **PSv**—The instructor presents a problem solving activity/task presented verbally for students to complete. PSv’s tend to be longer than a simple PQ; students are given time to think, discuss, or problem solve before arriving at their answer. Student codes frequently marked in response to PS include Ind, WR, QG, or WG.
- **ADV**—Active demo/movie/video/simulation. Showing or conducting a demo, experiment, simulation, video, or animation while students are also actively engaged in the activity (interacting with each other or instructor, using equipment, etc.). Also mark any time prior to demo in which instructor is explaining demo/setting it up.
- **PDV**—Passive demo/ movie/video/simulation. Showing or conducting a demo, experiment, simulation, video, or animation with little to no interaction with students. Also mark any time prior to demo in which instructor is explaining demo/setting it up.

Activity Follow-up Codes

- **Sfu**—Summary follow-up. When instructor gives follow-up to an activity that is only a summary/explanation (i.e. little to no student interaction). May be difficult to tell if Sfu is occurring or if lecture has begun. Mark Sfu only when the activity is being directly referenced and no new material is being presented.
- **Dfu**—Discussion follow-up. When instructor gives follow-up to an activity by interacting with students (often asking them how they arrived at their answer). Mark each PQv, AnQ, etc. that occurs during Dfu.

Other

- **O**—Other. Explain in comments

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Student codes
Non-Content or Non-Activity Codes

- **W**—Waiting (e.g. fixing AV problems, instructor otherwise occupied, etc.)

Student Assessment Codes

- **TQ**—Student taking a test or quiz
- **SP**—Formal presentation by student(s)

Student Listening and Responsiveness Codes

- **L<sub>I</sub>**—Listening to instructor speaking to whole class, while possibly taking notes (NOT when listening to instructor giving course administration or instructions to an activity)
- **LAd**—Listening to course administration or instructions to an activity given by instructor
- **L<sub>S</sub>**—Listening to other students speaking, while possibly taking notes, etc. L<sub>S</sub> should only be coded when the student response is lengthy (i.e. many sentences, longer than 1 minute)
- **R**—Responsiveness to instructor (e.g. laughing, collective sigh, etc.)

Student asks a question

- **SQ**—Student asks question (count number of times)

Student Responding Codes:

- **AnQ**—Student individually (and verbally) answers a question posed by the instructor with rest of class listening (count number of times)
- **GrA**—Students give group answer when the instructor poses a question to the class; the answer is given as a collective response rather than one individual student (count number of times)
- **PAn**—Student presents their answers to a problem or activity in front of the class via the board/large sticky note
- **V<sub>H</sub>**—Student votes for an answer by a show of hand (count number of times)
- **V<sub>T</sub>**—Student vote/poll an answer by using the clicker or a phone app to register their answers (count number of times)
- **MG<sub>S</sub>**—The students are moving around the classroom or physically moving their body or parts of their body in response to a prompt from the instructor.

Student prompted to think or work on activity/question/simulation/etc.:

- **Ind**—Individual thinking/problem solving. Only mark when working on an activity/question/problem individually (i.e. not when only listening to lecture).
- **WR**—Student writing on paper or computer/tablet
- **QG**—Discuss question or activity in groups. Ind could also be marked concurrently if more than half the class is not working in groups as instructed and are instead working individually.
- **WG**—working in groups on a problem or activity on a worksheet or handout
- **WDI**—Whole class discussion instructor led. Class is engaged in whole class discussion/debate with students and instructor offering explanations, opinion, judgment, etc. to whole class, largely facilitated by instructor (This is typically a longer class activity more than 2 minutes)
- **WDP**—Whole class discussion with peer-to-peer interaction. Class is engaged in whole class discussion/debate with students and instructor offering explanations, opinion, judgment, etc. to whole class, with peer to peer interaction. Only code when it is clear that students are interacting with other students while engaged in a whole class discussion, otherwise code WDI. (This is typically a longer class activity more than 2 minutes)
- **CW**—Students are working with a physical model or on a non-word processing computer software program. This is an activity you might see in a studio classroom, active learning classroom, or mathematics or physics lab.

Other

- **O**—Other. Explain in comments

**LEVELS OF ENGAGEMENT**
Attention

- Mark the percentage of students paying attention to classroom instruction, or engaged in classroom activity. Mark as high (more than 80% clearly engaged), medium (between 20-80% clearly engaged), and low (less than 20% clearly engaged). Classroom should be scanned sampled near the end of each 2 minute segment to determine engagement level.

Note-taking

- Mark the percentage of students engaged in note-taking during classroom instruction. Mark as high (more than 80% clearly taking notes), medium (between 20-80% clearly taking notes), low (less than 20% clearly taking notes), or zero (no students taking notes). Classroom should be scanned sampled near the end of each 2 minute segment to determine note-taking level.