

Observation Guide for Active-learning Classroom (simplified version on page 3)

C. Wieman 6/5/16

(This is to apply to modest size class, 6 to 80 or so, where students can work in groups, with the instructor circulating around them, often with TA helping.)

I. Activity design (assuming worksheet)

- a. Is goal of activity clear to students, so they engage quickly, or do they spent time trying to figure out what they are supposed to be doing or why?
- b. Does goal of activity seem appropriate? Does it involve practicing some skill that experts commonly use? Does it involve creating or interpreting a novel representation? Is there a particular difficulty or controversy in the task, rather than simply carrying through a lengthy procedure or something involving lots of writing, which could be better done as individual homework?
- c. Motivation-- is activity put in meaningful context (address real world issue or clear how will be useful in future activities)? Does task involve a decision or judgement with justification? Is task challenging, but doable working together, but with some easy initial parts that everyone can become engaged with? Does it relate to the type of problems on future exams and/or homework?

II. Activity Implementation

- a. Is it introduced in terms of big picture and/or learning goal for day? Does the instructor periodically return to this to remind students how they are progressing through big picture?
- b. Is there something students have to first do individually, ideally with some kind of product, before engaging in collaborative work?
- c. If there is any confusion about task, does instructor quickly notice and clarify to whole class?
- d. Is there a clear deliverable (completed worksheet etc.) that students are expected to produce? (Ideally both individually and collectively.)
- e. Does the instructor circulate, monitoring how each group is doing, helping as needed but not spending too much time with one or small number of groups while neglecting the others? Are the instructor and TA appropriately dividing up oversight and feedback?
- f. Are groups being monitored for level of engagement, group interaction, and progress towards solution?
- g. Does instructor or TA tend to jump in with answers or long lectures to groups or larger class before students have had sufficient opportunity to struggle with task?

- h. Are groups kept to appropriate size (2-4) so everyone can be engaged? Does the instructor intervene to encourage interaction in group where needed?
- i. Are there checkpoints at appropriate intervals, where instructor breaks in and makes sure everyone has reached a specific point, to resynchronize activities and ensure spread between groups is not getting too large and no group is stuck for too long?
- j. Is instructor monitoring progress and keeping duration of task appropriate, so few if any groups are finished for long enough to get off task, but all groups have been able to make substantial progress, before instructor brings class together for whole-class wrap up discussion?
- k. Is there appropriate wrap up, which brings out the important ideas and covers things some or all groups did not figure out, but avoiding spending time redoing what all groups already successfully completed? (i.e. is wrap-up adjusted according to how students did on the activity?). Is engagement encouraged by having various groups explain different parts of answer? Does wrap up lecture go on so long and/or repeats what they have already done, so that students start to disengage (not looking at instructor, etc.)? Do students never engage in the first place, because they know instructor will just be going through a detailed answer, regardless of what they do?
- l. Does instructor pause for questions and allow plenty of time (at least several seconds!) for students to formulate questions? Does instructor take good questions got during circulating amongst groups and bring them up during wrap up (either by telling the student is good question, wait and ask during wrap up if appropriate, or repeating the question asked)?

III. Student understanding and engagement

- a. How many students are off task and for how long? Are all students productively engaged, both individually when supposed to be, and as part of group when supposed to be?
- b. When groups are stopped and raising their hands with a question, does instructor or TA notice them quickly? Are there times when multiple groups are waiting with hands raised waiting for help?
- c. Are there any students who are being excluded from group discussions? Are these issues of chair and table layout, group size, gender or ethnicity? Does instructor notice and intervene to encourage collaboration?
- d. Are most groups getting activity nearly completed?
- e. Are many students asking deep questions during activity wrap up phase?
- f. Are there students not asking questions of the instructor, but whispering to neighbors during or right after instructor talking or at start of next activity? (May indicate they have question but are uncomfortable asking.)

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I. Activity design (assuming worksheet)

- a. Is goal of activity clear to students, so they engage quickly?
- c. Do the students show interest in the task, as indicated by level of attention and discussion?

II. Activity Implementation

- a. Is it introduced in terms of big picture and/or learning goal for day? Does the instructor periodically return to this?
- d. Is there a clear deliverable (completed worksheet etc.) that students are expected to produce? (Ideally both individually and collectively.)
- e. Does the instructor circulate, monitoring how each group is doing, helping as needed but not spending too much time with one or small number of groups while neglecting the others?
- f. Are groups being monitored for level of engagement, group interaction, and progress towards solution, with intervention where evident problems?
- i. Are there checkpoints at appropriate intervals (5-10 minutes), where instructor breaks in and makes sure everyone in class has reached a specific point?
- j. Is activity being cut off at suitable time, usually with balance of some but not all groups being finished, but all making substantial progress?
- k. Is there appropriate wrap up, which brings out the important ideas and covers things some or all groups did not figure out, but avoiding spending time redoing what all groups already successfully completed? (i.e. is wrap-up adjusted according to how students did on the activity?).
- l. Does instructor pause for questions during wrap up and allow plenty of time (at least several seconds!) for students to formulate questions?

III. Student understanding and engagement

- a. Are all students productively engaged when supposed to be? (Periodically check how many checking phones or otherwise obviously off task.)
- b. Are there groups spending significant time waiting with hands raised?
- c. Are there any students who are being excluded from group discussions?
- d. How many students are asking substantial questions during the class?