Implementation of a Teaching Tool Group Handout – November 9th, 2016

Please spend ~10 minutes each on questions 1, 2 and 3

1. **Smith et al. (2016) utilized "best practices" by Lark (2014) for the implementation of Avida-ED, which included use of this tool over an entire semester, implementation by an expert instructor, scaffolding the implementation, and implementation in both lab and lecture [page 3].**

a) What are the advantages, and disadvantages, if any, in following a refereed "best practices" when implementing your teaching tool of choice in class?
-Generally, implementing best practices is a good idea
-Advantage: these practices are "tried and true"
-Advantage: learning outcomes are addressed
-Disadvantage: May run into issues with scalability/adaptability to your specific class
-Disadvantage: time frame may be a hindrance

b) What tool(s) if any, have you introduced to your classroom, or observed in a classroom, to help students with challenging core material? For eg: small group problem solving assignments, iClickers.
-iClickers → low participation though
-Top Hat (used in lieu of iClickers) – but cost associated with this
-small group problem solving; each group has a different scenario → positive experience

c) How have you implemented (or observed the implementation of) a teaching tool – what were the steps, if any, taken to do so?
-for some, the tool has been used informally only
-"BioSim Module" was tried out within the first lab section
-More so have tested or tried out tools in class, sort of on a whim

2. **Avida-ED was piloted half-way through the semester (week 8) in the Spring 2014 course in lecture only, and fully implemented through the whole semester in the Fall 2014 course in both lecture and lab [page 4]. Both course sections were <100 students.**

a) What are the advantages, and disadvantages of implementing a new teaching tool mid-way through a semester? At the beginning of the semester?
-if trying it out midway, students will be experiencing a change in teaching method → do we then need "informed consent"?

b) Consider the amount of instruction required for students to become familiar with a teaching tool like Avida-ED both in lecture and in small groups in the lab. In larger (>100 students), lecture-only (no lab/tutorial), upper-year courses at the University of Guelph (eg: NUTR*3210, BIOC*3560, BIOL*3130), could a teaching tool which requires such instruction (e.g: Avida-ED) be valuable? Suitable? Feasible?
-technology required seems surmountable/not overly challenging
-would require multiple stages for implementation throughout the semester
-requires approval/go-ahead from multiple groups (administration, students)
-potentially feasible in lecture – however you must consider that some content may be cut
-if implementing in lab, you would need to train TAs ($$)

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3. **a) What challenges and constraints do you anticipate (or have you experienced) would inhibit the implementation of a teaching tool (eg: cost)?**

   -loss of content in order to fit the tool in (some profs OK with this, others are not)
   -COST → for the software? May require $ from university, or from students
   -COST → training of TAs if using in lab
   -student resistance to new methods of teaching (issues around buy-in)
   -class size? Smith et al. worked with much smaller class sizes than what UoG is used to

   b) Considering these constraints, could Avida-ED, or a modified version/similar tool be used in your discipline/your classes?

   -Can't really think of anything similar other than along the simulation-line tools
   -"SimBio Module" used as a textbook alternative .. not ideal though. Only small proportion of students used it
   -Depending on the questions that need to be answered/content that needs to be taught, Avida-ED may or may not be suitable
   -students may be more likely to use the tool if their participation is attached to a grade/marks
   -some websites offer similar material → issues around the website being out of the university's control, and the fact that students may not use them