dB-SERC lunch discussion
November 30, 2015 – Tim Nokes-Malach
Innovating Large Undergraduate Psychology Lectures with Learning Principles from Cognitive Science

Dr. Tim Nokes-Malach is flipping a large cognitive psychology course using the learning principles of cognitive science, e.g., 1. Analogical comparison, 2. Self-explanations, and 3. Memory retrieval practice.

Questions from attendees:

1. One of the attendees asked if "flipping" a course aligns the principle of "A time for telling," i.e., priming students to learn from a lecture. Can showing a lecture video, without priming students to learn from it, still help students learn effectively?
   Tim Nokes-Malach mentioned that students read the book first and then watch a video about the overarching principles that were in the reading. The reading+video+reading quiz can be considered "Just in Time Teaching." Students may undergo productive failure and struggle to learn when taking the reading quiz or working on challenging activities in class. This can create an opportunity for a "time for telling" in which a short lecture could benefit students.
2. The end of lecture quizzes are not graded. How will you ensure that students are doing them (and not just walking out of the class)?
   Tim Nokes-Malach mentioned that although the end of lecture quizzes are not graded, he spends a lot of time framing for students why it is important to engage in these memory retrieval practice quizzes. He takes the time to show students data from his own courses in which students practice answering questions on their own without looking at their books or notes. Students then may be able to see the advantages of attempting the end of lecture quizzes on their own.
3. Will Tim make the quizzes and videos available to the students to review after they have completed them?
   He was not yet decided on whether he will make these available to students.
4. One of the attendees mentioned that it might be a good idea to put end of lecture quiz questions on the out of class reading quizzes and questions from the out of class reading quizzes on the end of lecture quiz. Other attendees were favorable to this idea because it would help the instructor see how seriously the students are taking the ungraded quizzes vs. the graded quizzes. It would also help the instructor determine whether the students are learning from their mistakes.
5. One of the attendees asked if adding more outside of class activities puts more demands on students and whether this is reasonable to expect.
   Dr. Nokes-Malach mentioned that he consulted with ungraduated students to determine how much more out of class activities he could incorporate into his course. He is also planning on giving surveys to measure students' motivation and study strategies.
6. Do the self explanation activities help students engage in more meaningful reading from the book? Can there be a measure of whether there is transfer in students' self-explanation strategies to their reading of the book?
   Dr. Nokes-Malach mentioned that this is not something he had thought about, but would expect that students' book reading should become more reflective if the students are learning to construct self-explanations. It would be a good thing to measure via surveys, i.e., did the self explanations you worked on in class help you become a better reader outside of class? (or something like that).
7. One of the attendees mentioned that she liked all of the principles Tim was using in his classroom, but was afraid that the time investment might be too much if she were to "flip" her own classroom. Is there a way to "flip" lite, i.e., use a few of the principles with the most effective use of the instructor's time?
   Dr. Nokes-Malach mentioned that this is one of the areas in which he intends to explore further – are there time intensive activities that do not help the students learn better that can be "dropped"? Are there activities that do not take as much time to create but that help the students learn more effectively that should be incorporated into any flipped course? Are there activities that take a long time to create but that are very helpful in helping students learn better? Hopefully in upcoming meetings, Dr. Nokes-Malach can expound further on this topic of "flipping" lite.