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Want to maximize your student learning gains?

Take your clicker use to another level using evidence-based peer instruction

What are your students thinking in class? As an expert it is difficult to predict areas of confusion for students, especially if the confusion lies at the fundamental level. **Peer instruction makes student thinking visible and increases learning gains.**

Peer instruction in classrooms involves students working together on a learning task (Crouch and Mazur,2001).

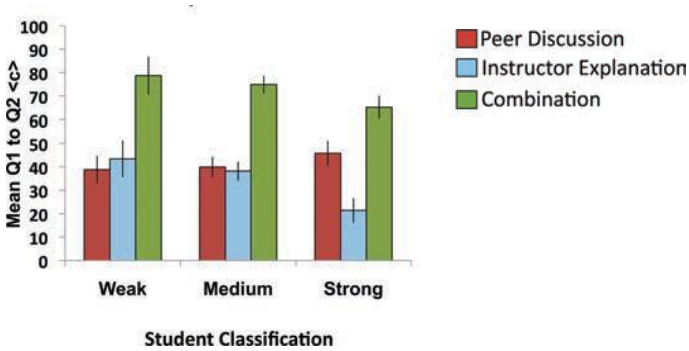
Basic peer instruction with clickers (Vickrey et al., 2015)

1) Pose question: aim for high-level conceptual question
2) Give students time to think on their own
3) Students answer individually: need to commit to answer
4) Instructor checks response distribution (**don't** show class)
5) Peer discussion: explain **reasoning** with neighbor when answer ranges ~ 35-70% correct (Crouch and Mazur, 2001)
6) Students revote
7) Instructor follow-up: with student contribution and instructor explanation
8) ask your STLF about variations on this basic strategy

What's the evidence for peer instruction?

- Smith et al. (2011) assessed the effectiveness of three instructional modes: peer instruction, instructor explanation, and the 2 combined for students of varying abilities (Fig. 1).
  - All students benefitted the most from the combination of peer discussion followed by the instructor explanation.
  - Skipping peer discussion and only giving the instructor explanation to save time **does not** result in better learning gains.
  - Strong performers learn the least by instructor explanation alone, and learn ~2x more by verbalizing and discussing the possible answers with their peers.
  - Students who initially answered correctly (step 3 above) as well as on the revote, gained a more in-depth understanding of the concepts after peer instruction (Brooks and Koretsky, 2011)

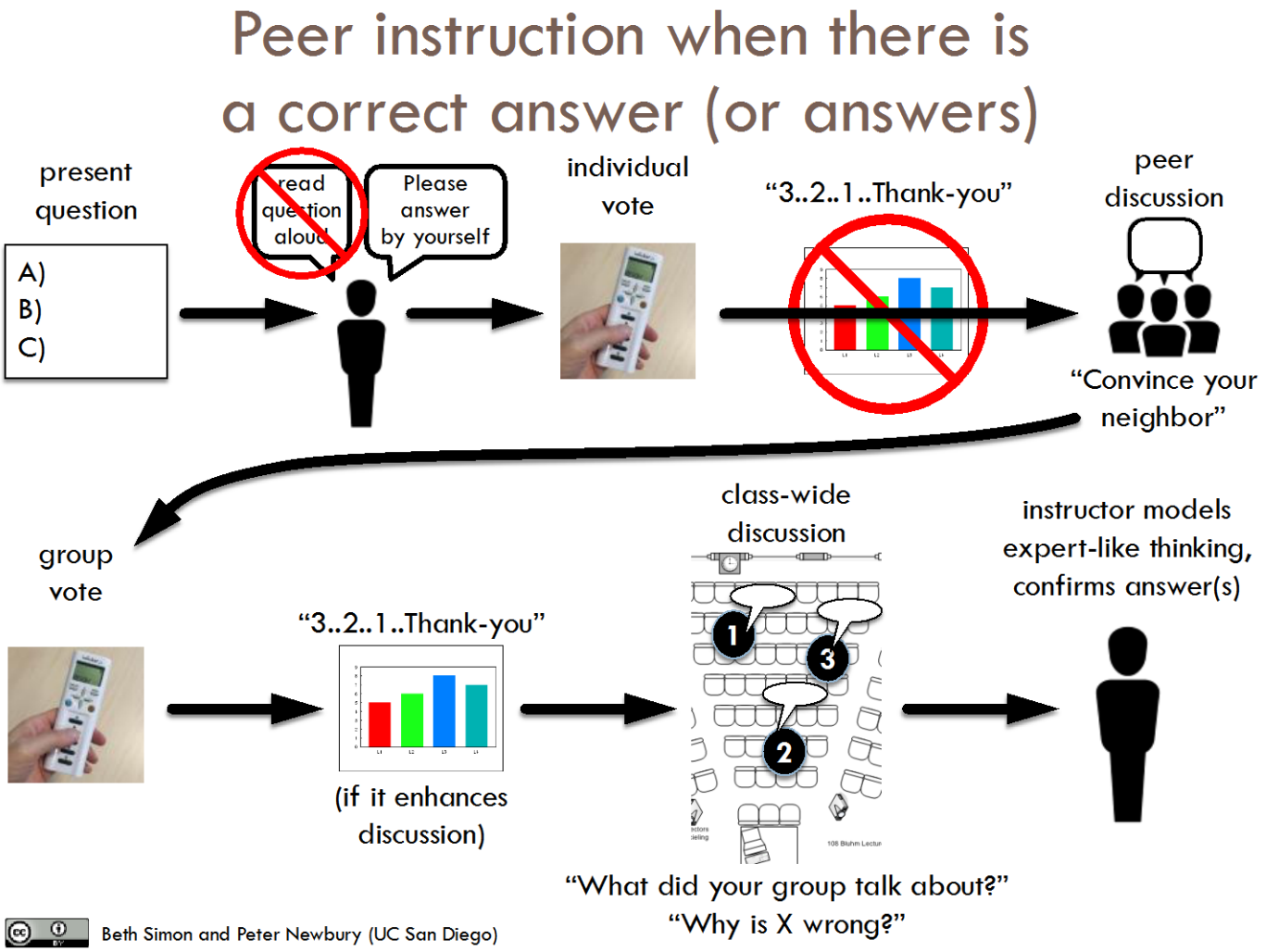
Figure 1. Comparison of three instructional modes: peer discussion (aka peer instruction), instructor explains the answer, or a combination of both, and how they affect clicker responses for students (n=150) identified as weak, medium, or strong clicker performers (Smith et al., 2011).



What do students say?

"It's really helpful to hear what others think and how they approach their answers, it's useful to persuade others since you need to understand how you approach the question in mind before you verbally expressed them out."
- Student response to a survey at UBC

From B. Simon and P. Newbury



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Interested? EOAS-SEI can help, from a brief consultation to low-stakes classroom feedback.

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