Think Aloud Pair Problem Solving [TAPPS]

Overview: A *Think Aloud* is a research procedure used in the cognitive sciences to explore how people think. It involves presenting a problem or question and then observing people think aloud—talk about what they are thinking as they work through the problem. In *Think Aloud Pair Problem Solving* students pair up with one in the role of problem solver and the other as listener. For each new problem, students switch roles.

TAPPS is a form of practice; students work through newly learned ideas and procedures. By thinking aloud they are more likely to recognize gaps or inconsistencies in their thinking. In some cases, the listener can also ask questions or even offer suggestions. TAPPS is a technique that allows instructors to get a close look at how students think about the material or work with new procedures.

Initially, thinking aloud may be awkward for students, but most catch on with a little practice. The instructor can demonstrate thinking aloud to show what it should look like. Students sometimes try to edit their thinking or get caught up in performing rather than simply staying on track and externalizing one's thinking about the problem. Students sometimes encounter silent spells and need to be reminded by the listener to *keep talking*.

Once students become acclimated to thinking aloud, the instructor should take advantage of the class period to observe pairs of students. Observing how students think can reveal some of the difficulties and problems students experience with the subject matter.

Example: see http://serc.carleton.edu/NAGTWorkshops/metacognition/activities/28754.html.

Reference: Barkley, E. Cross, P., & Major, C. (2005). Collaborative learning techniques: A handbook for college faculty. San Francisco: Jossey Bass, pp. 172-176.