Circuits Virtual Community of Practice

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Session 6: Making the classroom more interactive
April 25th, 2013

Agenda

- Welcome and Learning Objectives ~ 5 mins
- Activity: Team Reports on Designing A Project Activity ~ 30 mins
- Active Learning overview ~ 5 mins
- Activity: Active Learning Think-Pair-Share ~ 25 mins
- Wrap-up & Plans for Session 7 ~ 5 mins

Session 6: Active Learning

- Arrange to meet/interact with your team online, by conference call, email exchange, blog postings, …
- Expand on the ideas developed during the breakout sessions today and develop a well-defined project activity for students in a typical circuits and electronics class.

Session 6: Learning Objectives

- Identify key characteristics of active learning
- Identify challenges of implementing active learning techniques and key strategies to address these challenges

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Activity

- Each group will report (~ 5 minutes each) on their intersession activity
  - Describe the activity designed by your group
    - What were the primary considerations that went into the design?
  - Highlight the questions, challenges, topics of discussion that came up during the process

- Group order:
  1. Yacob, Melinda, Adrian, Jack, John
  2. Keith, Gloria, Joe, Zoulikha
  3. Michael C., Aaron, Stella, Cecilia
  4. Jim, Michael G., Archie, Frank
  5. Paul, Mohammed, Will, Miguel

What is Active Learning?

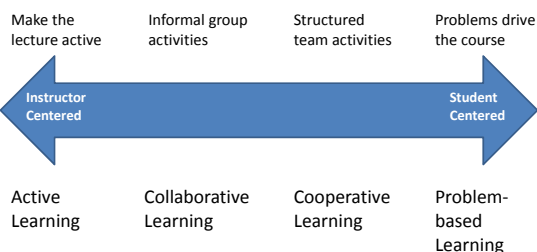Active learning…
… engages students in the learning process
… doing and reflecting

Involving students in doing things and thinking about what they are doing. (Bonwell & Eison, 1991)

Key elements include critical thinking, individual responsibility for learning, involvement in open-ended activities, organization of learning activities by the instructor. (Berry, 2008)

The Active Learning Continuum*

| Make the lecture active | Informal group activities | Structured team activities | Problems drive the course |

Instructor Centered ←————————————————→ Student Centered

| Active Learning | Collaborative Learning | Cooperative Learning | Problem-based Learning |

*adapted from Prince, NAE FOEE 2010 (http://www.nae.edu/File.aspx?id=37791)

The Cone of Learning

Activity

- Discussion questions:
  - What obstacles or barriers prevent you as a circuits instructor (or faculty, generally) from using active learning strategies?
  - How can these barriers be overcome?
  - Why does active learning appeal (or not appeal) to you?

- Individually, **think** about your answers to the discussion questions (4 mins)
- Using private chat, **pair** up (alphabetically, according to the list of Participants in the Attendees window) and discuss your answers (5 mins)
- In your breakout group, **share** highlights of your paired discussion. (10 mins)

Session 7: Active Learning (con't)

In preparation for Session 7 (May 2nd):

- Review "Recommendations for making active learning work": http://www1.umn.edu/ohr/teachlearn/tutorials/active/recommendations/index.html
- Read and be prepared to discuss the following articles from the ASEE VCP portal
  - "Does Active Learning Work? A Review of the Research" by Michael Prince
  - Idea Paper #53: Active Learning Strategies in Face-to-Face Courses
- Post a detailed example of how you use active learning in your class (or, think of a possible implementation) in the Session 7 folder. Please **post by noon on Tuesday, April 30th**.
- Prior to the next session, review the examples posted on the portal.