Leadership Virtual Community of Practice (LVCP)

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Session 5: Pedagogies of Engagement – Part 3
February 12, 2013

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- Mid-course review, complete by **noon on Feb 11**
  - Complete the *LVCP Mid-Course Review* via SurveyMonkey at www.surveymonkey.com/s/YNRSXZ6
  - With your LVCP partner, create your own Mid-Course Review, post it to the portal, and be prepared to discuss
- Pedagogies of Engagement – Part 3: Using student teams
  - Watch the following two videos
    - http://web.mit.edu/edtech/casestudies/teal.html#video
    - http://youtu.be/IfT_hoiuY8w
  - Read the CRLT Occasional paper on student teams and the "Key Elements of Cooperative Learning" handout posted at the portal

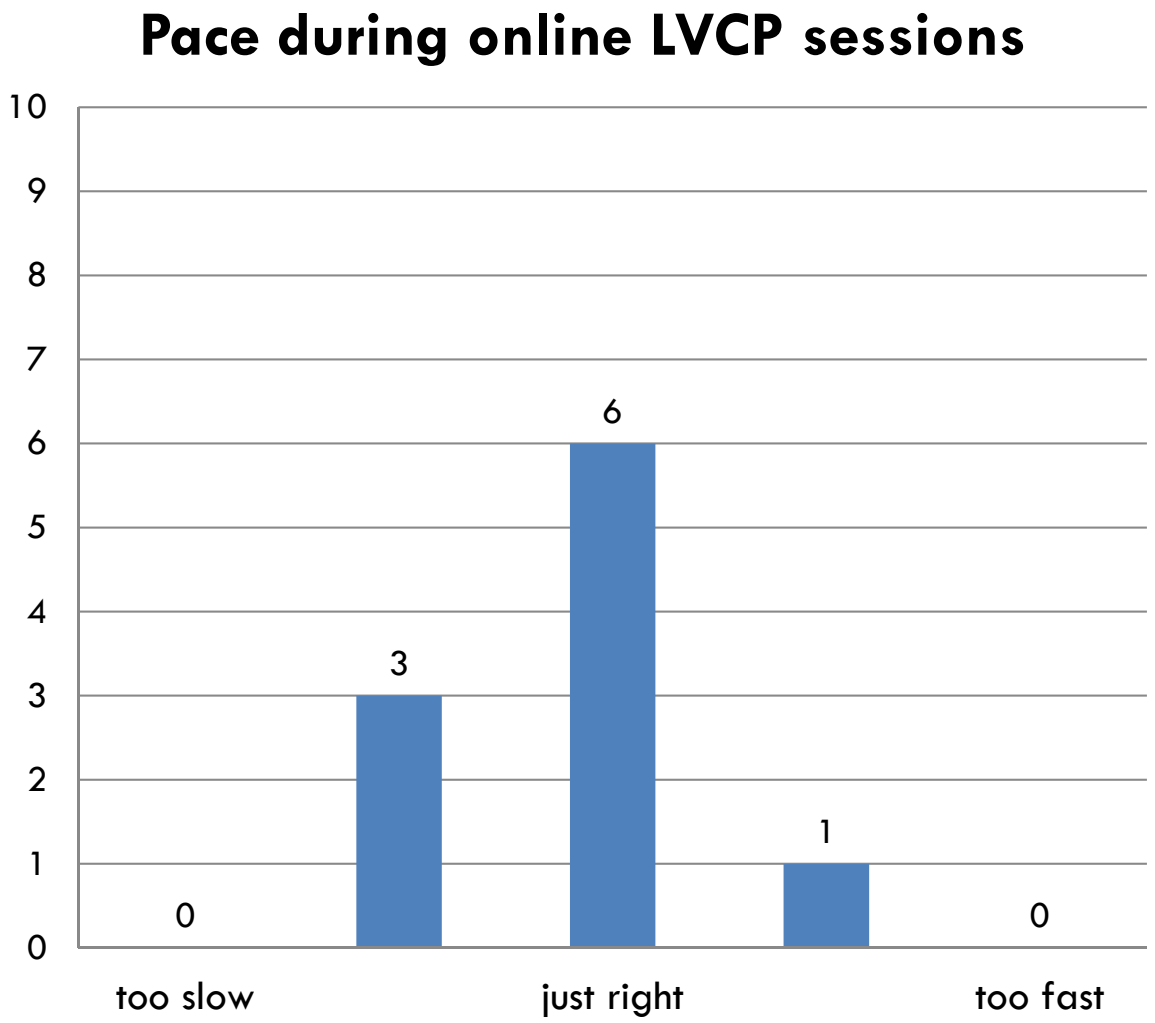
Tentative Agenda

- Welcome and learning objectives ~ 5 minutes
- Report on mid-course reviews: LVCP results and VCP plans ~30 minutes
- Discussion of student teams ~20 minutes
- Wrap up and plans for Session 6 ~ 5 minutes

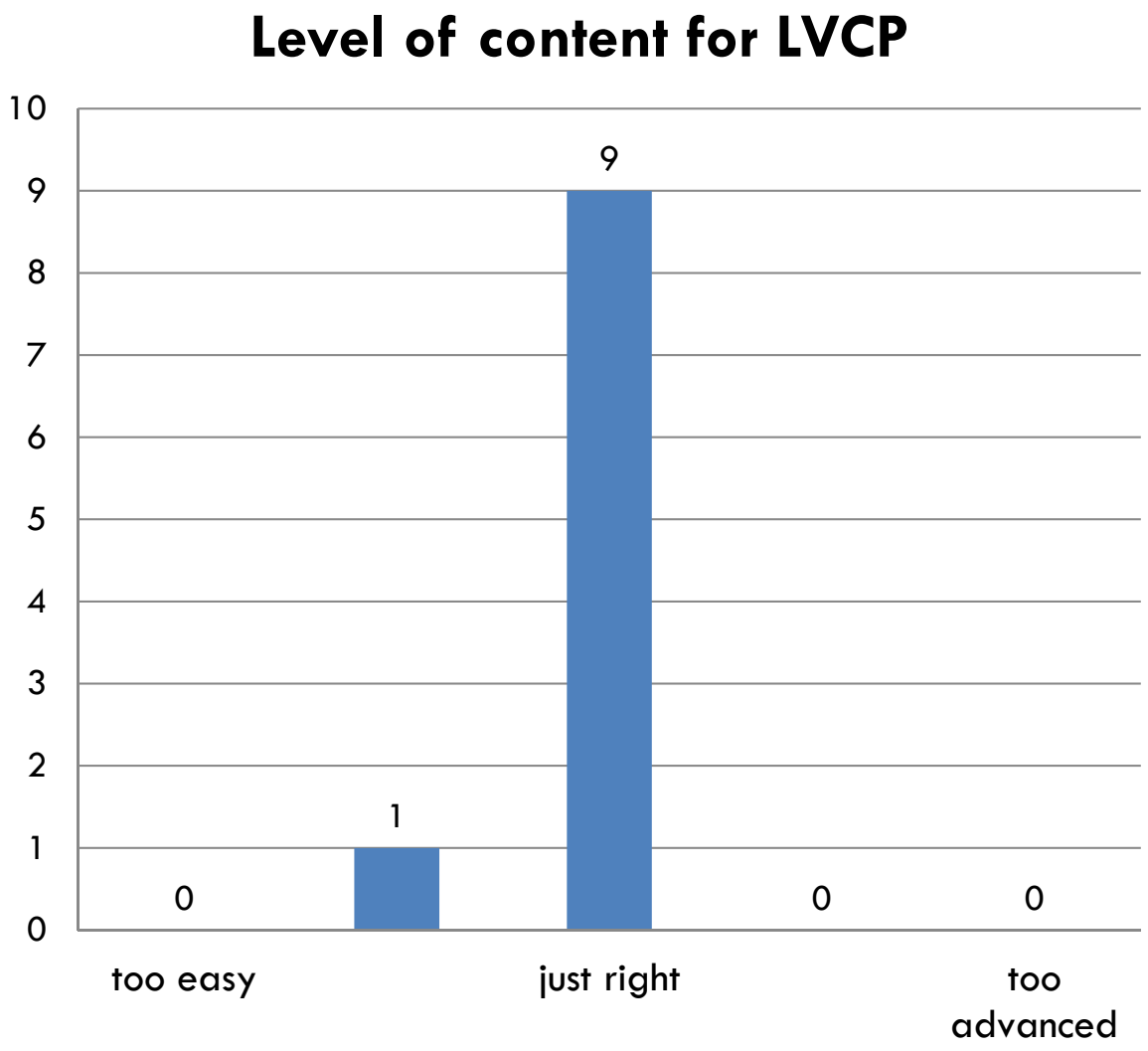
Session 5: Learning Objectives

- Describe formats and explain rationale for mid-course reviews
- Develop a plan to conduct a mid-course review in your VCP
- Explain instructor's role in formal cooperative learning groups (formal teams)
- Articulate potential VCP applications of formal teams

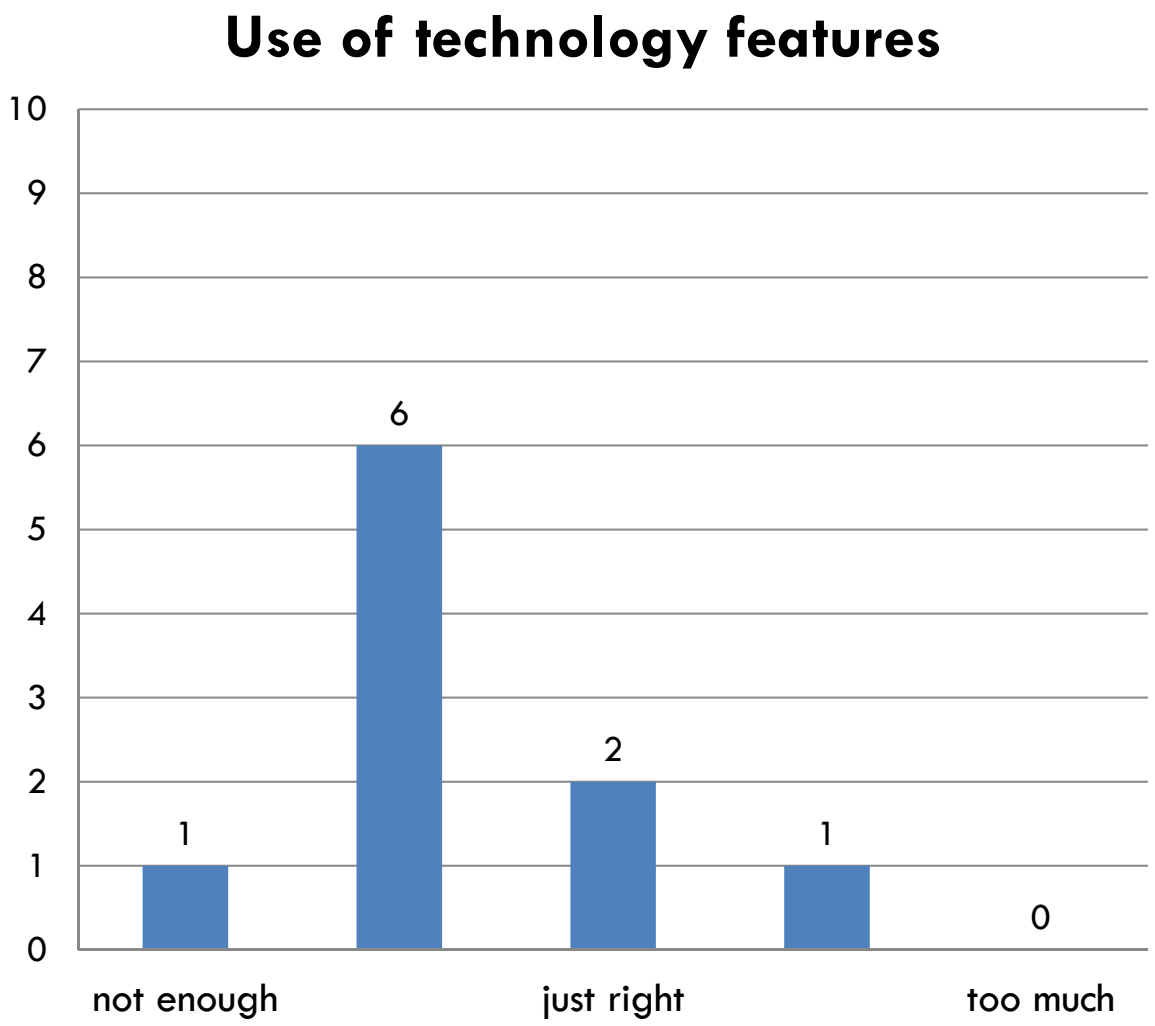
LVCP Mid-Course Review. Pace



LVCP Mid-Course Review. Content



LVCP Mid-Course Review. Technology



What's been most interesting/useful/valuable?

- Concrete examples, readings, assignments, other resources
- Community discussion, collaboration
- Being a "participant"

What has helped you learn?

- Hearing from others
- Readings
- Assignments
- Two week format for each topic

What has been most challenging?

- Difficulties with technology
- Trade-offs of round-robin format (lack of spontaneous discussion)
- Very tight schedule (consider every other week sessions)

- Apprehension about the coming VCPs

Mid-Course Review for your VCPs

- Report on mid-course reviews (~20 minutes)
  - Mechanics, Thermo, Materials, Circuits, FOEE (~3 minutes/pair)

Mid-Course Review: Mechanics

DRAFT Midpoint survey - Mechanics

1. The pace of the VCP has been:
   Too slow Just right Too fast

2. The required workload (reading, assignments, etc) has been:
   Too much Just right Too little

3. *How well do you understand* the pedagogy and basic principles of the following active learning strategies (Likert type scale) ? (will depend on what we actually cover)
   - Think-pair-share
   - Clickers and technology in the classroom
   - JiTT
   - Model-eliciting activities
   - Flipped classrooms

4. *How confident are you that you could effectively deploy in your own classroom* the pedagogy and basic principles of the following active learning strategies (Likert type scale) ? (will depend on what we actually cover)
   - Think-pair-share
   - Clickers and technology in the classroom
   - JiTT
   - Model-eliciting activities
   - Flipped classroom

5. How well has the technology served the purposes of this VCP? (Likert type scale)
6. Which references have been the most helpful to you? (open response)
7. What has especially helped your learning in the VCP? (open response)
8. What has hindered your learning? (open response)
9. What could be done to enhance your experience? (open response)
10. What would you like to see be discussed in the second half? (check all that apply)

    List…. PBL, research grants, writing ASEE papers, etc.

Mid-Course Review: Thermodynamics

Midterm Formative Assessment
Thermodynamics VCP

As a means of formative assessment, we have developed this short assessment. Please take about five minutes to answer the questions.

Name:

Likert

How has the pace been during the online LVCP session? Likert (too slow, just right, too fast)

How has the "level" of the content been for the LVCP? Likert (too easy, just right, too advanced difficult)

How effective has the use of technology features (e.g., polling, whiteboard, etc.) for the LVCP been? Likert (Not enough, just right, too much)

Free response

Do you plan to change instruction of thermodynamics next year? How?

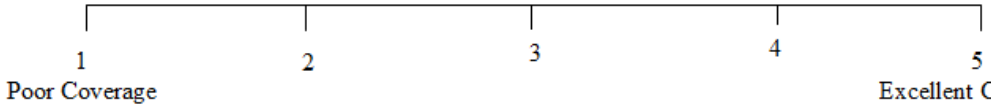
How well has the VCP met your objectives for effecting change in your teaching?

Is there any other feedback that you want to provide about this VCP regarding the content, the processes or methods, or your experience?

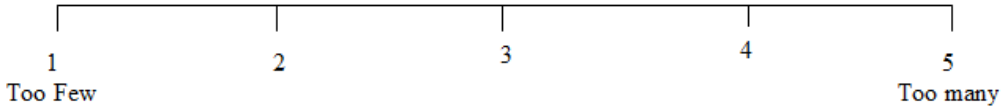
Mid-Course Review: Materials

Material/Energy Balance VCP - Survey Questions

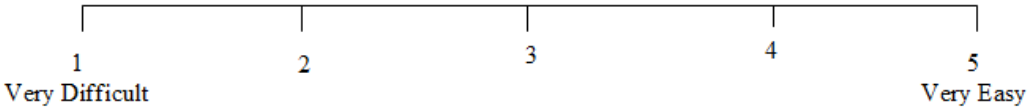
1) Was the coverage of topics satisfactory?



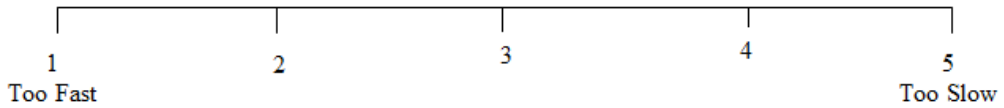
2) How many topics were covered?



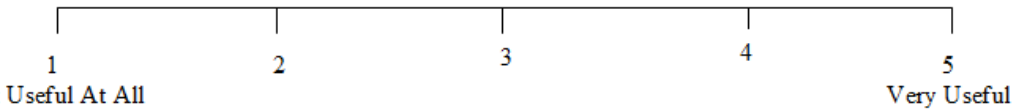
3) How easy was it to use the technology?



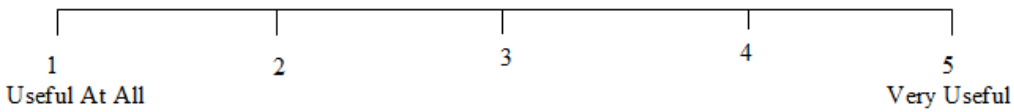
4) Was the pace of the coverage of material too fast? Too slow?



5) Were the activities in the sessions useful?



6) Were the activities outside of the sessions useful?



7) What has been the most useful thing you've learned so far?

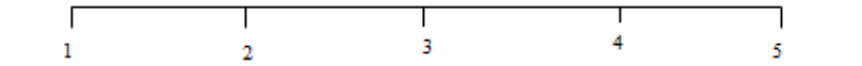
8) What activities have you seen that you intend to implement in your own class?

Mid-Course Review: Circuits

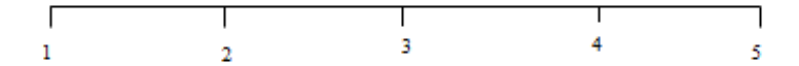
Circuits VCP - Survey Questions

Rate Your Experiences:

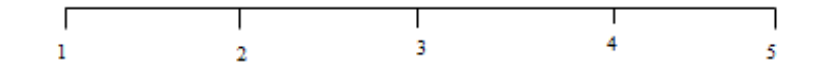
1) Was the coverage of topics satisfactory?



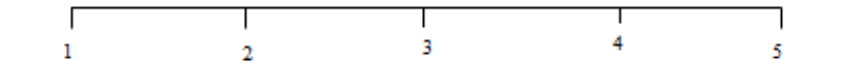
2) How was the pace of the online sessions?



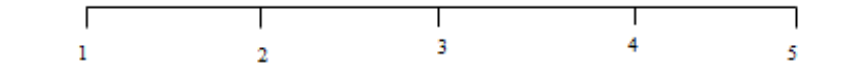
3) How easy was it to use the technology?



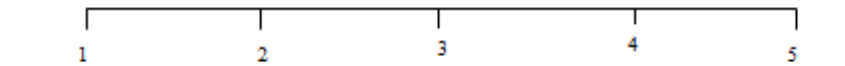
4) How effective has the use of online collaboration technology been?



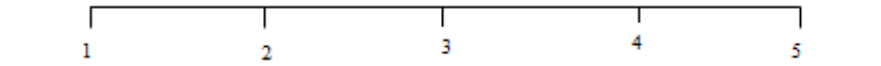
5) Were the activities in the sessions useful?



6) Were the activities outside of the sessions useful?



7) Based on what you have learned through the VCP, how well-prepared do you feel you are at this point to implement a new delivery approach in your circuits class?



Progress Toward Meeting Goals

1) What has been the most interesting and/or useful information you have learned in the VCP?
2) What activities have you seen that you intend to implement in your own class?
3) How well has the VCP met your expectations for effecting change in your circuits course?

General Feedback

1) What specific suggestions do you have for improving your VCP experience?
2) Are there any topics critical to the application of new pedagogy to circuits that should be receiving more or less treatment than the overall plan for the VCP suggests?

Notes on other issues we were thinking about.

1. Comment box after each of the survey questions.
2. Add a question on time commitment. The concern is that we may be better off not addressing issue. It may send the wrong message.
3. Add a question on what their opinion is of the knowledge they had before the VCP and see if this has changed.
4. Where would you place yourself on the novice to expert continuum for engineering education research?
5. Our plan is to provide the participants with a timeline with milestones & key activities for the VCP and for the development of their course. Need to come up with a question to obtain feedback on this.

Mid-Course Review: FOEE

FOEE VCP Formative Evaluation of Mid-Term Progress

NOTE… to be given out after April 18th or 25th (this will be the end of the 3rd or 4th fourth week of our 7 week session)

To provide some formative assessment of FOEE VCP to date, Mary and Jennifer have developed a short survey. Please take no more than five minutes to answer the questions.

Name:

Scaled Questions

1. How has the pace been during the online FOEE VCP session? (too slow, just right, too fast)
2. Has the content of the FOEE VCP been what you expected? (not what I expected/envisioned, what I expected/envisioned)
3. How has the "level" of the content been for the FOEE VCP? (too easy, just right, too advanced difficult)
4. How effective has the use of technology features (e.g., polling, whiteboard, etc.) for the FOEE VCP been? (Not enough, just right, too much)

Open-Ended Questions

1. Have you had sufficient time to think about your intervention plan? Do you have any questions or specific challenges that you would like to discuss with us or the FOEE VCP group?
2. To date, how well has the FOEE VCP met with your envisioned objectives for being a change agent at your institution?
3. Please indicate any other feedback you may have about the FOEE VCP regarding the content, the processes or methods, or your experience?

Formal Cooperative Learning

Instructor's Role in Formal C.L.

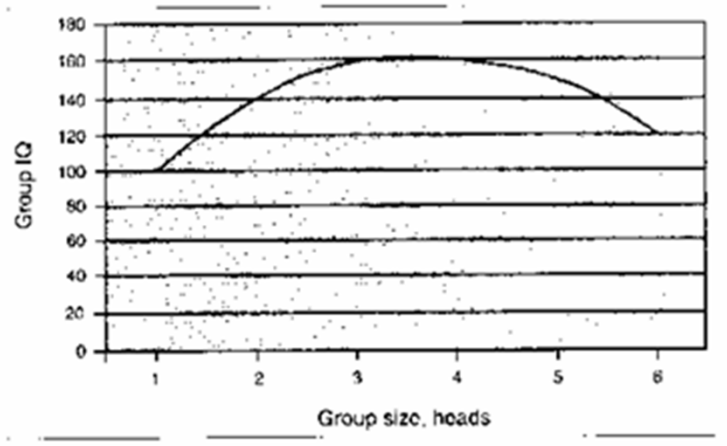
- Specify objectives
- Make pre-instructional decisions
- Explain task and cooperative structure (positive interdependence and individual accountability)
- Monitor and intervene to teach teamwork skills
- Evaluate students' achievement and group effectiveness

- See the LVCP portal for elaboration on Instructor's Role and a planning template

Decisions, Decisions…

- Task group size?
- Group selection?
- Group member roles?
- How long to leave groups together?
- Type of task?
- Arranging the room?
- Providing materials?
- Time allocation?

Formal C.L. Task Group Size



- Perkins, D. 2003. *King Arthur's Round Table: How collaborative conversations create smart organizations*. New York: Wiley.
- Hackman, J.R. 2002. *Leading Teams: Setting the stage for great performances*. Boston: Harvard Business School Press.
- Smith, K.A. 2014. *Teamwork and project management, 4th Ed.* New York: McGraw-Hill.

Types of Formal C.L. Tasks

- Jigsaw – Learning new conceptual/procedural material
- Peer composition or editing
- Reading comprehension/interpretation
- Problem solving, project, or presentation
- Review/correct homework
- Constructive academic controversy
- Group tests

Typical Engineering Examples

1. **Problem solving, project, or presentation** (goal, role and task interdependence)
2. **Jigsaw** – Learning new conceptual/procedural material (goal and task interdependence)
3. **Group Tests** – Individual exam followed by a cooperative exam (learning goal and single product interdependence)

Framing Problem-Based C.L. for Students

- Task
- Expectations for individuals
- Strategies for cooperation
- Criteria for success
- Evaluation methods
- Individual accountability
- Expected behaviors
- Intergroup cooperation

Application to Your Own VCP

- To what extent and in what ways do you want to engage your VCP participants in formal cooperative learning, especially knowing:
  - the critical importance of teams in the engineering profession,
  - the increasing use of student teams in the classroom, and
  - the complexities involved with effectively implementing formal cooperative learning?

Team Processing

- What have you used to monitor group effectiveness?
  - Plus/delta format
  - CATME
  - Team charter or group ground rules contract form
  - Code of cooperation

- Examples are posted at the portal, please post more

Session 6. February 19, 2013

- Post additional resources related to student teams to the portal
- With your VCP partner, develop a lesson plan for your session on student teams, post it to the portal, and be prepared to discuss it
- Read the Blanchard & Cook article on virtual learning communities posted at the portal; then post at least one question about the reading and answer one question using *Forum*