

Assessing Students in Team-Based Learning

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**Workshop co-organized by the Center for
Engineering Education Innovation (E2I) and Center
for Enhanced Learning and Teaching (CELT)**

17 May 2011

Session Objectives

- Participants will be able to describe key elements of:
 - Interdependence and Accountability for High Performance Teamwork
 - Strategies for Individual and Team Assessment
 - Trade offs between meaningful and manageable assessment
- Participants will begin applying key elements to the design on a course, class session or learning module

Workshop Layout

- Welcome & Overview
- Background Knowledge Survey
- Integrated Course Design (CAP Model)
- Team-Based Learning
 - Cooperative Project & Problem-Based Learning
 - Professor's Role in Design and Assessment
- Teamwork – Team Decision Making
 - Multiple forms of assessment
- Implications and Applications
- Wrap-up and Next Steps

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Background Knowledge Survey

- Familiarity with
 - Integrated Content-Assessment-Pedagogy (CAP) Course Design Models
 - Team-Based Learning (Project & Problem-Based Learning)
 - First Year – Capstone
 - Cooperative Learning Strategies
 - Informal – Formal
 - Development of Student's Teamwork Skills
 - Assessment Strategies
 - Classroom Assessment, e.g. muddiest point
 - Team-Based Learning Assessment
 - Group Processing, e.g., Plus/Delta
 - Team Charter
 - Team Contract (Agreement)
 - Individual/Peer Reflection and Review
 - Process Observation
- Previous Workshop Participation
 - Development and Assessment of Teamwork Skills – Edmund Ko – 1 December 2010



Development and Assessment of Teamwork Skills

Edmond Ko
Hong Kong University of Science and
Technology

1 December 2010



Workshop outcomes

- By the end of this workshop, you should be able to:
 - describe the characteristics of an effective student team;
 - explain the important elements of team-based learning; and
 - design a learning experience, including an appropriate assessment strategy, that would enhance effective teamwork skills.

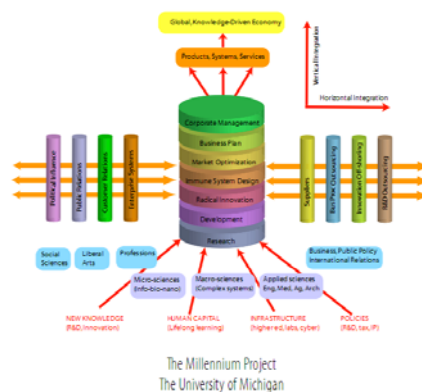
It could well be that faculty members of the twenty-first century college or university will find it necessary to set aside their roles as teachers and instead become designers of learning experiences, processes, and environments.

James Duderstadt, 1999 [Nuclear Engineering Professor; Dean, Provost and President of the University of Michigan]



Engineering for a Changing World

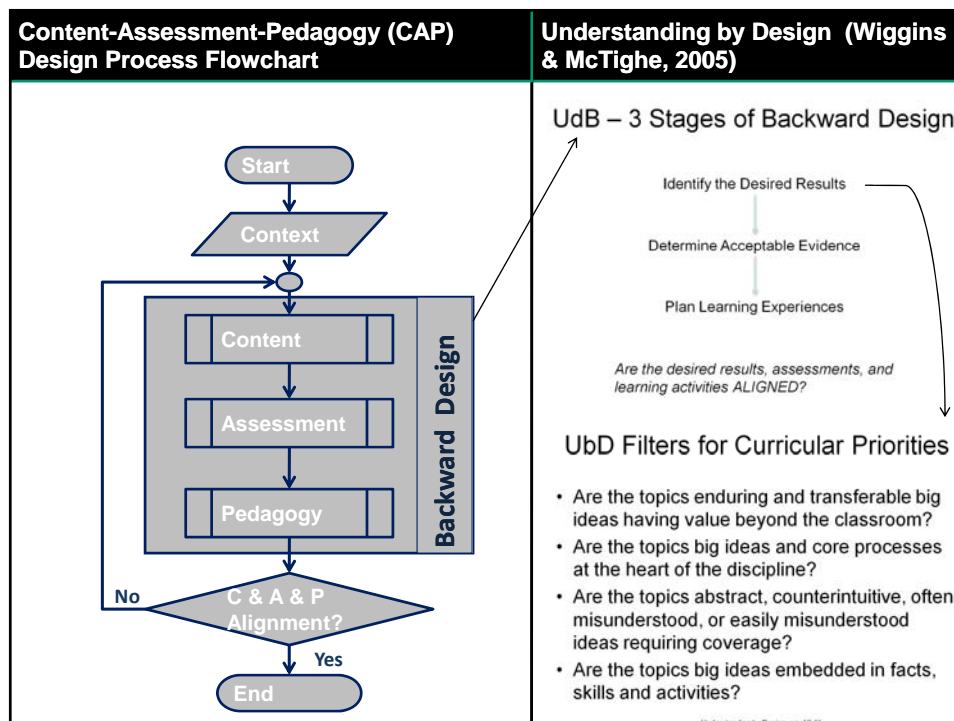
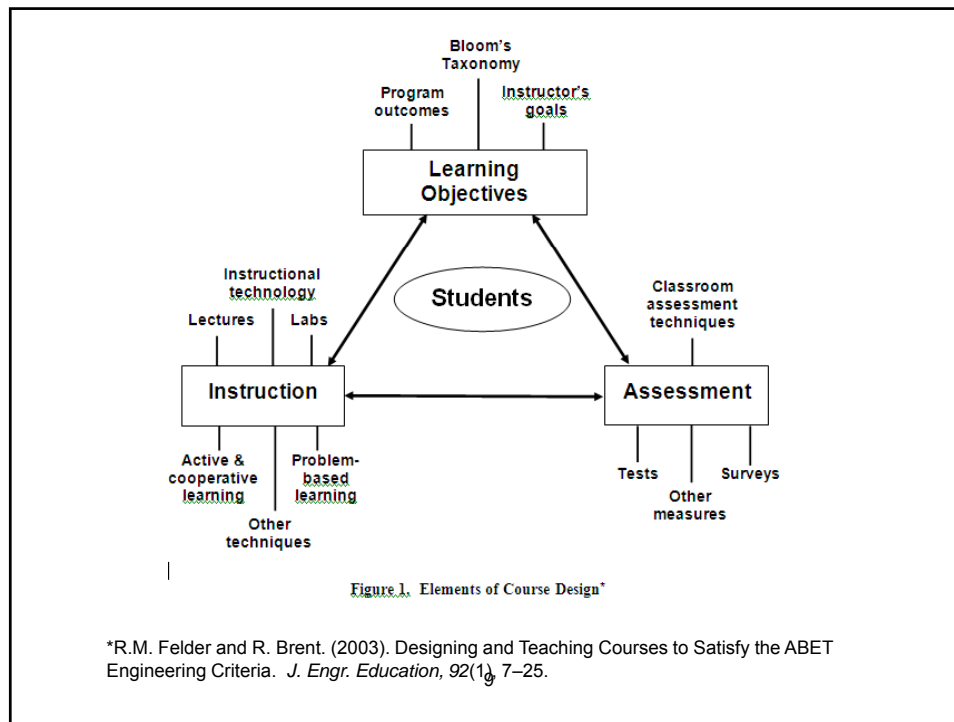
A Roadmap to the Future of
Engineering Practice, Research, and Education



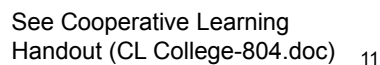
...objectives for engineering practice, research, and education:

To adopt a systemic, research-based approach to innovation and continuous improvement of engineering education, recognizing the importance of diverse approaches—albeit characterized by quality and rigor—to serve the highly diverse technology needs of our society

<http://milproj.ummu.umich.edu/publications/EngFlex%20report/download/EngFlex%20Report.pdf>



- **Informal** Cooperative Learning Groups
- **Formal** Cooperative Learning Groups
- Cooperative **Base** Groups



- Positive Interdependence
- Individual and Group Accountability
- Face-to-Face Promotive Interaction
- Teamwork Skills
- Group Processing



Professor's Role in Formal Cooperative Learning

1. Specifying Objectives
2. Making Decisions
3. Explaining Task, Positive Interdependence, and Individual Accountability
4. Monitoring and Intervening to Teach Skills
5. Evaluating Students' Achievement and Group Effectiveness

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Decisions, Decisions

Group size?
Group selection?
Group member roles?
How long to leave groups together?
Arranging the room?
Providing materials?
Time allocation?

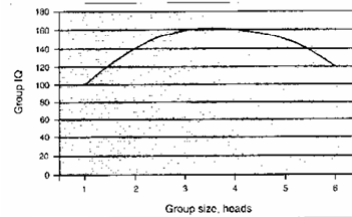
14

Formal Cooperative Learning Task Groups



Perkins, David. 2003. *King Arthur's Round Table: How collaborative conversations create smart organizations*. NY: Wiley.

Hackman, J.R. 2002. *Leading Teams: Setting the Stage for great performances*. Boston: Harvard Business School Press.



How Should Colleges Prepare Students To Succeed In Today's Global Economy?

Based On Surveys Among Employers And Recent College Graduates

Conducted On Behalf Of:
The Association Of American Colleges And Universities

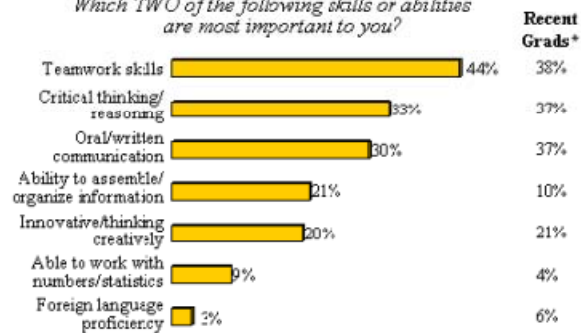
By Peter D. Hart Research Associates, Inc.

December 28, 2006

Peter D. Hart Research Associates, Inc.
1724 Connecticut Avenue, NW
Washington, DC 20009

Most Important Skills Employers Look For In New Hires

Which TWO of the following skills or abilities are most important to you?



* Skills/abilities recent graduates think are the two most important to employers

<http://www.aacu.org/advocacy/leap/documents/Re8097abcombined.pdf>

Top Three Main Engineering Work Activities

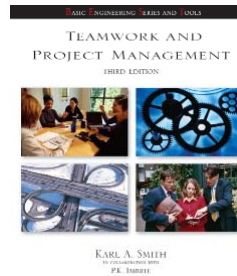
Engineering Total

- Design – 36%
- Computer applications – 31%
- Management – 29%

Civil/Architectural

- Management – 45%
- Design – 39%
- Computer applications – 20%

Burton, L., Parker, L., & LeBold, W. 1998.
U.S. engineering career trends. *ASEE Prism*, 7(9), 18-21.



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Design team failure is usually due to failed team dynamics

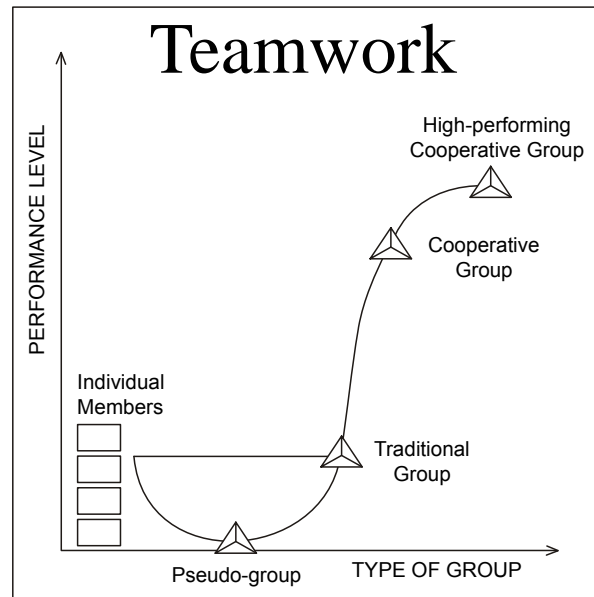
(Leifer, Koseff & Lenshow, 1995).

It's the soft stuff that's hard, the hard stuff is easy

(Doug Wilde, quoted in Leifer, 1997)

Professional Skills

(Shuman, L., Besterfield-Sacre, M., and McGourty, J., "The ABET Professional Skills-Can They Be Taught? Can They Be Assessed?" *Journal of Engineering Education*, Vo. 94, No. 1, 2005, pp. 41–55.)



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Characteristics of Effective Teams?

- ?
- ?

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A team is a small number of people with complementary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable

- SMALL NUMBER
- COMPLEMENTARY SKILLS
- COMMON PURPOSE & PERFORMANCE GOALS
- COMMON APPROACH
- MUTUAL ACCOUNTABILITY

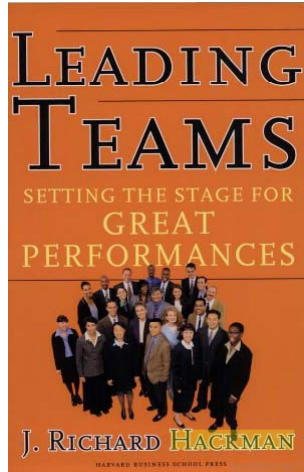
--Katzenbach & Smith (1993)
The Wisdom of Teams

Six Basic Principles of Team Discipline

- Keep membership small
- Ensure that members have complimentary skills
- Develop a common purpose
- Set common goals
- Establish a commonly agreed upon working approach
- Integrate mutual and individual accountability

Katzenbach & Smith (2001) *The Discipline of Teams*

Hackman – Leading Teams



- Real Team
- Compelling Direction
- Enabling Structure
- Supportive Organizational Context
- Available Expert Coaching

Team Diagnostic Survey (TDS)

<https://research.wjh.harvard.edu/TDS/>

Real Team

- clear boundaries
- team members are interdependent for some common purpose, producing a potentially assessable outcome for which members bear collective responsibility
- at least moderate stability of membership

Compelling Direction

- Good team direction is:
 - challenging (which energizes members)
 - clear (which orients them to their main purposes)
 - consequential (which engages the full range of their talents)

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Enabling Structure

- Key structural features in fostering competent teamwork
 - Task design: The team task should be well aligned with the team's purpose and have a high standing on "motivating potential."
 - Team composition: The team size should be as small as possible given the work to be accomplished, should include members with ample task and interpersonal skills, and should consist of a good diversity of membership
 - Core norms of conduct: Team should have established early in its life clear and explicit specification of the basic norms of conduct for member behavior.

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Comparison of Learning Groups

Less Structured (Traditional)

Low interdependence. Members take responsibility only for self. Focus is on individual performance only.

Individual accountability only

Assignments are discussed with little commitment to each other's learning.

Teamwork skills are ignored. Leader is appointed to direct members' participation.

No group processing of the quality of its work. Individual accomplishments are rewarded.

More Structured (Cooperative)

High positive interdependence. Members are responsible for own and each other's learning. Focus is on joint performance.

Both group and individual accountability. Members hold self and others accountable for high quality work.

Members promote each other's success. They do real work together and help and support each other's efforts to learn.

Teamwork skills are emphasized. Members are taught and expected to use social skills. All members share leadership responsibilities.

Group processes quality of work and how effectively members are working together. Continuous improvement is emphasized.

Smith, K.A., Sheppard, S.D., Johnson, D.W. & Johnson, R.T. 2005. Pedagogies of Engagement: Classroom-Based Practices (Cooperative and Problem Based Learning). *Journal of Engineering Education*, 94 (1), 87-101.

Reflection and Dialogue

- Individually reflect on your experience with (1) Integrated Course Design and (2) Structuring Learning Groups. Write for about 1 minute
 - Key ideas, insights, applications – Success Stories
 - Questions, concerns, challenges
- Discuss with your neighbor for about 3 minutes
 - Select one Insight, Success Story, Comment, Question, etc. that you would like to present to the whole group if you are randomly selected
- Whole group discussion

Teamwork Skills

- Communication
 - Listening and Persuading
- Decision Making
- Conflict Management
- Leadership
- Trust and Loyalty



Group Task and Maintenance Roles

Group Task Roles	Group Maintenance Roles
Initiating	Encouraging
Seeking Information	Expressing Feelings
Giving Information	Harmonizing
Seeking Opinions	Compromising
Giving Opinions	Facilitating Communications
Clarifying	Setting Standards or Goals
Elaborating	Testing Agreement
Summarizing	Following

Cooperative Learning and Assessing Student Learning

1. Use a criterion-referenced system for all assessment and evaluation
2. Use a wide variety of assessment formats
 - performance-based assessment
 - authentic assessment
 - total quality learning
3. Conduct assessment and evaluation in the context of learning teams
4. Directly involve students in assessing each other's level of learning
5. Assess, assess, assess, assess, and assess!

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Evaluation Methods ¹¹		
	Engineering Faculty	All Faculty
Grading "on the curve"	43%**	22%
Research/ Term papers	19	33
Multiple choice exams	10*	32
Essay exams	21	43
Student presentations	15	27
Percent of those using the technique in all or most classes		
**highest of all fields		
* lowest of all fields		

¹¹Astin, Alexander W. 1993. Engineering outcomes. *ASEE PRISM*, 3(1), 27-30.

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UCLA-HERI Faculty Survey

The American College Teacher:

National Norms for 2007-2008

Methods Used in "All" or "Most"	All – 2005	All – 2008	Assistant - 2008
Cooperative Learning	48	59	66
Group Projects	33	36	61
Grading on a curve	19	17	14
Term/research papers	35	44	47

<http://www.heri.ucla.edu/index.php>

Normal Distribution = Failure

It is not a symbol of rigor to have grades fall into a 'normal' distribution; rather, it is a symbol of failure – failure to teach well, to test well, and to have any influence at all of the intellectual lives of students – Milton, et al. 1986, p 225^[1]

^[1]Milton, O., Pollio, H.R., and Eison, J.A. 1986. *Making sense of college grades*. San Francisco: Jossey-Bass.

Bloom's Distribution

If we are effective in our instruction, the distribution of achievement should be very different from the normal curve. In fact, we may even insist that our educational efforts have been unsuccessful to the extent that the distribution of achievement approximates the normal distribution. (p. 52)

Bloom, B. S., Madaus, G. F., and Hastings, J. T.,
Evaluation to improve learning. New York, NY: McGraw-Hill, 1981.

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Types of Assessment

1. Diagnostic Assessment
Conducted at the beginning of an instructional unit, course, semester. . . to determine the present level of knowledge, skill, interest. . . of a student, group or class.
2. **Formative Assessment**
Conducted periodically throughout the instructional unit. . .to monitor progress and provide feedback toward learning goals.
3. Summative Assessment
Conducted at the end of an instructional unit or semester to judge the quality and quantity of student achievement and/or the success of the instructional unit.

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Minute Paper (Classroom Assessment Technique)

- What was the most useful or meaningful thing you learned during this session?
- What question(s) remain uppermost in your mind as we end this session?
- What was the “muddiest” point in this session?
- Give an example or application
- Explain in your own words . . .

Angelo, T.A. & Cross, K.P. 1993. Classroom assessment techniques: A handbook for college teachers. San Francisco: Jossey Bass.

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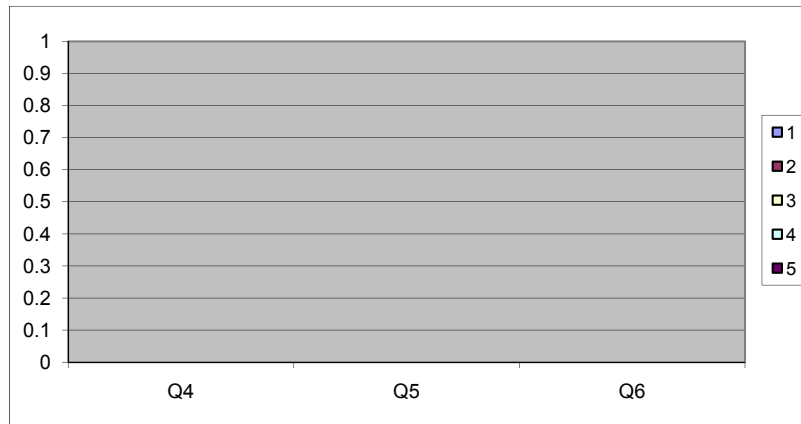
Session Summary (Minute Paper)

Reflect on the session:

1. Most interesting, valuable, useful thing you learned.
2. Things that helped you learn.
3. Question, comments, suggestions.
4. Pace: Too slow 1 5 Too fast
5. Relevance: Little 1 . . . 5 Lots
6. Instructional Format: Ugh 1 . . . 5 Ah

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HKUST – Assessing Students in TBL – Session 1 (5/17/11)

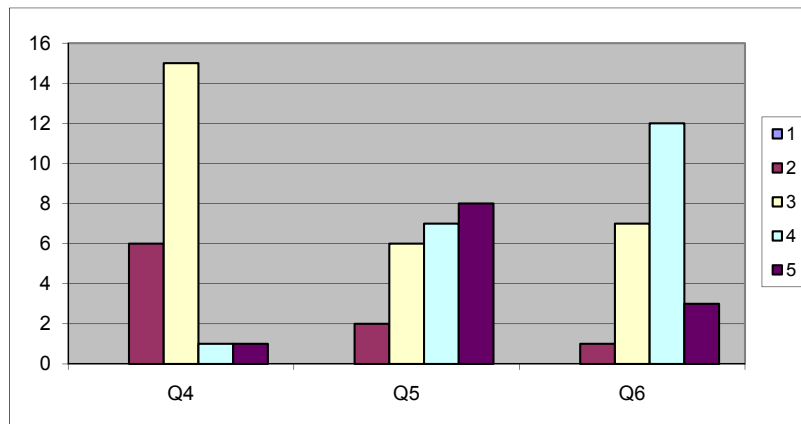


Q4 – Pace: Too slow 1 5 Too fast ()

Q5 – Relevance: Little 1 . . . 5 Lots ()

Q6 – Format: Ugh 1 . . . 5 Ah ()

MOT 8221 – Spring 2011 – Session 1 (3/25/11)



Q4 – Pace: Too slow 1 5 Too fast (2.9)

Q5 – Relevance: Little 1 . . . 5 Lots (3.9)

Q6 – Format: Ugh 1 . . . 5 Ah (3.7)

Assessment Formats

1. Performance-Based Assessment

Students demonstrate what they know and can do by performing a procedure or skill

2. Authentic Assessment

Students demonstrate a procedure of skill in "real life" context (See "approximations of practice")

3. Total Quality Learning

Continuous assessment of the process of learning (and teamwork) to improve it

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Making Assessments Meaningful

1. To be meaningful, assessment has to have a purpose that is significant

2. Assessments are meaningful when students are involved in conducting the assessment.

3. Meaningful assessments provide a direction and road map for future efforts to learn.

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Team-Based Learning Exercise

- Team Decision Making
- Team-Based Learning Assessment Formats
 - Individual Reflection and Review
 - Process Observation
 - Group Processing – Plus/Delta

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Teamwork Skills

- Communication
 - Listening and Persuading
- **Decision Making**
- Conflict Management
- Leadership
- Trust and Loyalty

Cooperative Teamwork Skills	Teaching Cooperative Skills
Forming Skills Initial Engagement Skills <ul style="list-style-type: none"> • Move into Groups Quickly • Stay With the Group • Use Quiet Voices • Take Turns • Use Names, Look at Speaker • No "Put Down's" 	1. Help students see the need to learn the skill. 2. Help them know how to do it (short). 3. Encourage them to practice the skill daily. 4. Help them reflect on process, a whole unit. 5. Help them persevere until skill is automatic.
Functioning Skills Group Management Skills <ul style="list-style-type: none"> • Share Ideas and Opinions • Ask for Facts and Reasoning • Give Direction to the Group's Work (not assignment purpose, provide time limits, offer encouragement) • Encourage Everyone to Participate • Ask for Help or Clarification • Express Support and Acceptance • Offer to Explain or Clarify • Praise/Encourage Others' Contributions • Enlighten the Group • Describe Feelings When Appropriate 	Monitoring, Observing, Intervening, and Processing Monitor to promote academic & cooperative success. Observe for appropriate teamwork skills; praise their use and remind students to use them if necessary. Intervene if necessary to help groups solve academic or teamwork problems. Process so students continuously analyze how well they learned and expanded in order to continue successful strategies and improve when needed.
Forming Skills Final Methods for Processing Materials <ul style="list-style-type: none"> • Summarize What You Learned • Both Accurately by Correcting/Adding to Summaries • Help the Group Find One Way to Remember • Check Understanding by Demanding Vocalization • Ask Others to Plan for Self-Reflecting/Teaching Our Group 	Ways of Processing Positive Feedback: <ol style="list-style-type: none"> 1. Have everyone students tell the class something their partner(s) did which helped them learn today. 2. Have all students tell their partner(s) something the partner(s) did which helped them learn today. 3. Tell the class helpful behaviors you saw today. Group Analysis: <ol style="list-style-type: none"> 1. Name 3 things your group did today, which helped you learn and work well together. 2. Name 1 thing you could do even better next time.
Forming Skills Stimulate Cognitive Conflict and Reasoning <ul style="list-style-type: none"> • Critique Ideas without Criticizing People • Differentiate Ideas and Reasoning of Members • Integrate Ideas into Single Positions • Ask for Justification on Conclusions • Extend Answers • Probe by Asking In-depth Questions • Generate Further Answers • Test Reality by Checking the Groups Work 	Cooperative Skill Analysis: <ol style="list-style-type: none"> 1. Rate your use of the target cooperative skill. 2. "Praise" "Praise" "Praise" each other. 3. Decide how you will encourage each other to practice the target skill next time. Start: "Tell your partner you're glad they're here!" End: "Tell your partner you're glad they were here today. Thank them for helping!"

Interaction Book Company
 6128 Highway Ave. S., Edina, MN 55424
 (612) 851-4000 Fax: (612) 851-4002
 www.interaction.org

U.S. Trade & Dressing, D.T. Johnson, & J. Johnson
 1998, *Integration of Cooperative Learning into the*
Journal of Engineering Education, Vol. 1, 45-50.
 Copyright © 1998, U.S. Trade & Dressing, D.T. Johnson, & J. Johnson
 All rights reserved. Reproduction in the Journal of Engineering Education, Vol. 1, 45-50, 1998, is prohibited.

Formal Decision-Making Approaches

Objective	Deterministic	Stochastic
Multiple	Ranking AHP SMART	MAUT
Single	B/C LP Optimization	Decision Tree (EV) Simulation

Team Decision Making – Ranking Tasks

- Typically “survival” tasks
 - First was Moon Survival, “Lost on the moon” developed by Jay Hall for NASA in 1967
 - Many survival tasks available – desert survival, lost at sea, winter survival, ...
- Individual followed by team ranking
- Different decision-making conditions in each team

Team Member Roles

- Observer/ Process Recorder (non participant role)
- Facilitator/Time Keeper
- Task Recorder
- Skeptic/Prober

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Action	Name 1	Name 2	Name 3	Name 4	Total
Contributes Ideas					
Describes Feelings					
Encourages Participation					
Summarizes, Integrates					
Checks for Understanding					
Relates New To Old Learning					
Gives Direction To Work					
Total		48			

Postdecision Questionnaire

1. How understood and listened to did you feel in your group?
Not at all 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 Completely
2. How much influence do you feel you had in your group's decision making?
None 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 A great deal
3. How committed do you feel to the decision your group made?
None 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 A great deal
4. How much responsibility do you feel for making the decision work?
None 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 A great deal
5. How satisfied do you feel with the amount and quality of your participation in your group's decision making
Dissatisfied 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 Satisfied
6. Write one adjective that describes the atmosphere in your group during the decision making

Group Processing Plus/Delta Format

Plus (+) Things That Group Did Well	Delta (Δ) Things Group Could Improve

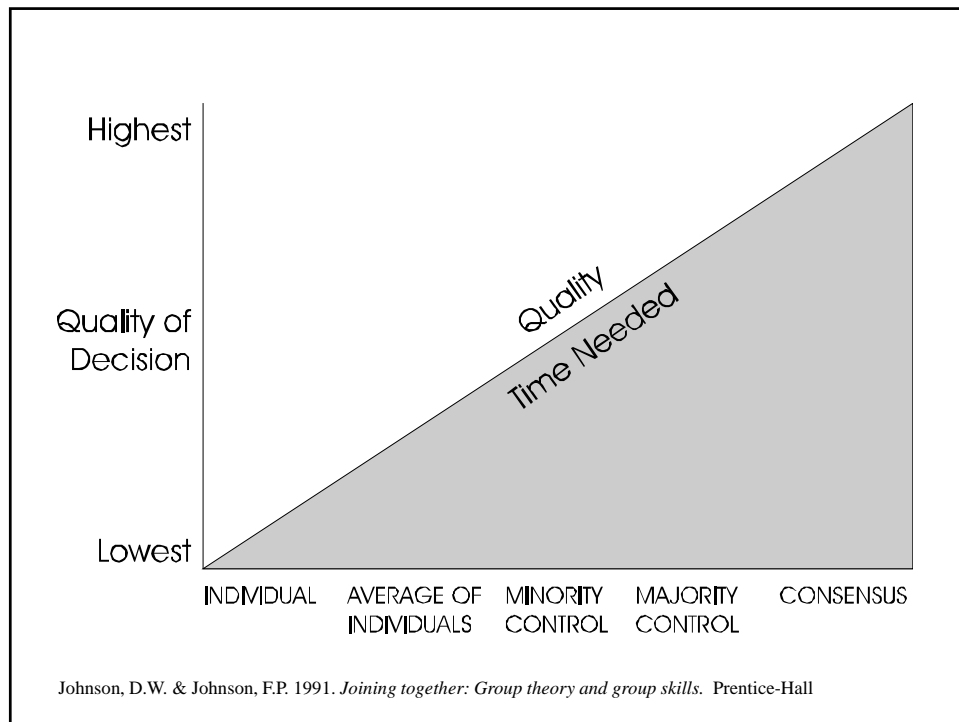
Team Decision-Making Process

- How
 - Individual
 - Mathematical
 - Consensus
 - Iterative – H, M, L
 - Both ends toward the middle
- Assumptions/Biases
 - Family/Friends
 - News
 - Youth
 - Geographic location

Methods of Decision Making (Johnson & Johnson, 1991)

1. Decision by authority without discussion
2. Expert member
3. Average of member's opinions
4. Decision by authority after discussion
5. Majority control
6. Minority control
7. Consensus

See Table Summarizing Characteristics – Smith (2007), p. 46



Two Approaches to Decision Making

Garvin & Roberto, 2001. *Harvard Business Review*, 79(8), 108-116.

	Advocacy	Inquiry
Concept of decision making	A contest	Collaborative problem solving
Purpose of discussion	Persuasion and lobbying	Testing and evaluation
Participants' role	Spokespeople	Critical thinkers
Pattern of behavior	Strive to persuade others Defend your position Downplay weaknesses	Present balanced arguments Remain open to alternatives Accept constructive criticism
Minority views	Discouraged or dismissed	Cultivated and valued
Outcome	Winners and losers	Collective ownership

A Litmus Test (Gavin & Roberto)

- Multiple Alternatives
- Assumption Testing
- Well-defined Criteria
- Dissent and Debate
- Perceived Fairness

Gavin, David A. and Roberto, Michael A. 2001. What you don't know about making decisions. **Harvard Business Review**, 79 (8), 108-116.

Making Assessments Manageable -- Involve Students --

Myths About Team-Based Assessment

1. If you assess student learning, you have to give students grades.
2. Faculty must read every student paper and provide feedback.
3. Students are not capable of meaningful involvement in assessment.
4. Involving students in assessment takes valuable time away from learning and lowers their achievement.
5. Assessment is a faculty responsibility, not to be done by students.
6. Individual assessment is lost in team-based approaches to assessment.

Team Charter

- Team name, membership, and roles
- Team Mission Statement
- Anticipated results (goals)
- Specific tactical objectives
- **Ground rules/Guiding principles for team participation**
- Shared expectations/aspirations

Code of Cooperation

- EVERY member is responsible for the team's progress and success.
- Attend all team meetings and be on time.
- Come prepared.
- Carry out assignments on schedule.
- Listen to and show respect for the contributions of other members; be an active listener.
- CONSTRUCTIVELY criticize ideas, not persons.
- Resolve conflicts constructively,
- Pay attention, avoid disruptive behavior.
- Avoid disruptive side conversations.
- Only one person speaks at a time.
- Everyone participates, no one dominates.
- Be succinct, avoid long anecdotes and examples.
- No rank in the room.
- Respect those not present.
- Ask questions when you do not understand.
- Attend to your personal comfort needs at any time but minimize team disruption.
- HAVE FUN!!
- ?

Adapted from Boeing Aircraft Group Team Member Training Manual

Ten Commandments: An Affective Code of Cooperation

- Help each other be right, not wrong.
- Look for ways to make new ideas work, not for reasons they won't.
- If in doubt, check it out! Don't make negative assumptions about each other.
- Help each other win, and take pride in each other's victories.
- Speak positively about each other and about your organization at every opportunity.
- Maintain a positive mental attitude no matter what the circumstances.
- Act with initiative and courage, as if it all depends on you.
- Do everything with enthusiasm; it's contagious.
- Whatever you want; give it away.
- Don't lose faith.
- Have fun

⁵⁹
Ford Motor Company

Group Ground Rules Contract Form

(Adapted from a form developed by Dr. Deborah Allen, University of Delaware)

Project groups are an effective aid to learning, but to work best they require that all groups members clearly understand their responsibilities to one another. These project group ground rules describe the general responsibilities of every member to the group. You can adopt additional ground rules if your group believes they are needed. Your signature on this contract form signifies your commitment to adhere to these rules and expectations.

All group members agree to:

1. Come to class and team meetings on time.
2. Come to class and team meetings with assignments and other necessary preparations done.

Additional ground rules:

1.

2.

If a member of the project team repeatedly fails to meet these ground rules, other members of the group are expected to take the following actions:

Step 1: (fill in this step with your group)

If not resolved:

Step 2: Bring the issue to the attention of the teaching team.

If not resolved:

Step 3: Meet as a group with the teaching team.

The teaching team reserves the right to make the final decisions to resolve difficulties that arise within the groups. Before this becomes necessary, the team should try to find a fair and equitable solution to the problem.

Member's Signatures:

Group Number: _____

1. _____

2. _____

3. _____

60 4. _____

Assessment at the Course Level

- Knowledge Survey
- Classroom Assessment (minute paper)
- **Mid-Term Review**
- **Student Management Team**
- **Peer Review**

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U of M: Course Evaluations - Microsoft Internet Explorer

Mid-Term Review

Address <https://eval.umn.edu/showTemplate.cfm?templateid=1060>

University of Minnesota
University Course Evaluations

Sample Form

Student Evaluation of Teaching (SET) - Early Semester Form B

The purpose of this survey is to provide the instructor with information that may help to improve this class. The results will be reported only to the instructor; they will not be used in tenure, promotion, and salary decisions. Your thoughtful written comments are especially requested.

Unsatisfactory	Marginal	Fairly Good	Very Good	Excellent	
(1)	(2)	(3)	(4)	(5)	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Your understanding of what is expected of you in this course.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	The instructor's clarity in presenting or discussing course material.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	The instructor's use of examples or illustrations.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	The instructor's encouragement of students to think about course material.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	The instructor's ability to speak clearly and audibly.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	The instructor's success in getting you interested or involved.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	The instructor's availability to answer questions or provide help.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	The instructor's respect and concern for students.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Your comfort in asking questions or expressing an opinion in class.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Helpfulness of feedback on assignments or class work.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Degree to which evaluation procedures (e.g. exams, quizzes) measure your knowledge and understanding.

Much Less Less About the same More Much more

(1) (2) (3) (4) (5)

How much does the amount of work required in this class compare with that in similar classes you have taken?

<http://eval.umn.edu>

Student Management Team

A student management team will be used in this course to operationalize Total Quality Management principles. The attributes of student management teams are described below, and the operation of the team is based on shared responsibility:

Students, in conjunction with their instructor, are responsible for the success of any course. As student managers, your special responsibility is to monitor this course through your own experience, to receive comments from other students, to work as a team with your instructor on a regular basis, and to make recommendations to the instructor about how this course can be improved. (Nuhfer, 1990-1995).

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Attributes of Student Management Teams

- 3 - 4 students plus teaching team.
- Students have a managerial role and assume responsibility for the success of the class.
- Students meet weekly; professor attends every other week. Meetings generally last about one hour.
- Meet away from classroom and professor's office.
- Maintain log or journal of suggestions, actions and progress.
- May focus on the professor or on the content.
- Utilize group dynamics approach of TQM.


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Wm. Campbell & Karl
Smith. *New Paradigms for
College Teaching*.
Interaction Books, 1997.


edited by
**Wm. E. Campbell
& Karl A. Smith**

Parker J. Palmer	Donald F. Dansereau
Nel Noddings	& Dianna Newbern
Wendy Bishop & Toby Fulwiler	Tom Creed
Craig Nelson	Karl A. Smith & Alisha A. Waller
Terrence Collins	David W. Johnson & Roger T. Johnson
Edward B. Nuhfer	Valerie Ann Bystrom

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Center for Teaching and Learning Services

PEER REVIEW OF TEACHING

- [Peer Observation Guidelines and Recommendations](#)
- [Links to Peer Review Resources](#)
- [Classroom Observation Instruments](#)

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- [Assessment of Learning \(LoLoLo\)](#)
- [Teaching Consultations](#)
- [Thank A Teacher](#)

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- [Online Workshops](#)
- [Customized Workshops](#)

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- [Mid-Career Teaching Program](#)
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- [Teaching Mentors of a Life in Teaching](#)
- [Multicultural Teaching Program](#)
- [Push Internationalizing the Curriculum](#)
- [Push Innovative Teaching w/ Tech](#)

Resources

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- [Faculty & TA Handbook](#)
- [Journals & Resources](#)
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Peer review of teaching is a form of evaluation designed to provide feedback to instructors about teaching and learning in their courses. Peer review may be used either as a way to help instructors improve teaching and learning in their courses, known as a **formative review**, or it may be part of a formal reward system used in tenure and pay decisions, known as a **summative review**.

In general, peer review is a collaborative process in which the instructor under review works closely with a colleague or group of colleagues to discuss his or her teaching. The format of a peer review will vary depending on its purpose. In some cases, colleagues may evaluate and discuss teaching materials and curricula; in other cases, they may visit a class session to observe the teacher in action.

The peer review process yields important information that can be combined with other sources to provide a comprehensive view of an individual's teaching. Other materials that can be used in concert with peer review are student evaluations, administrator assessment, feedback on student work, or self-assessment documentation such as a teaching portfolio.

The University of Minnesota has adopted a formal policy on peer review. To read the senate policy, visit [Protocols for Student Evaluation and Peer Review of Faculty Teaching](#) [Contact Us](#).

The Purpose of This Site

This web site is intended to:

- help departments establish and implement a peer review process;
- help departments improve their current peer review process;
- prepare individuals to participate in the peer review process by helping them document their teaching, gather appropriate materials, etc.
- prepare individuals to carry out a peer review of their colleagues;
- provide examples of peer review systems currently in use at the University of Minnesota (forthcoming).

CTLS Can Help

The Center for Teaching and Learning Services is committed to improving the quality of teaching at the University of Minnesota. Staff members are available to assist individuals, departments, or programs in developing and implementing a peer review process. The Center offers consultation services, specialized workshops, forms for peer observation and review, and a variety of online resources. For more information, or to speak with a [minnTeach](#) contact the Center at 612-314-2534.

Reflection and Next Steps

- What is the most useful/valuable thing you have learned in today's workshop?
- What is one thing you will implement?
- What questions do you still have?

Resources

- Angelo, T.A. and Cross, K. P. 1993. *Classroom Assessment Techniques: A Handbook for College Teachers*. San Francisco: Jossey-Bass.
- Johnson, David W. and Johnson, Roger T. 2004. *Assessing Students in Groups: Promoting Group Responsibility and Individual Accountability*, Corwin.
- Maki, P.L. 2004. *Assessing for learning*. AAHE/Stylus
- Walvoord, B.E. and Anderson, V.J. 1998. *Effective grading practices: A tool for learning and assessment*