


Part I. Collaborative and Cooperative Learning: The Basics

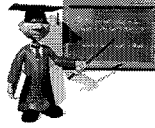
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Charles I. Gragg
 (1940: Because Wisdom Can't be Told)

**"A student of business with tact
 Absorbed many answers he
 lacked.
 But acquiring a job,
 He said with a sob,
 How does one fit answer to fact?"**

Traditional Teachers



- Supposed sage, manager, conveyer
- Sets the agenda
- Learner is a sponge
- Passive learning & discrete knowledge
- Objectively assess, competitive
- Text- or teacher-centered
- Transmission model
- Lack interconnections & inert
- Squash student ideas




The Tao of Teaching

- A wise teacher lets other have the floor.
- Trying to appear brilliant does not work.
- The gift of a great teacher is creating an awareness of greatness in others.
- Facilitate what is happening, rather than what you think ought to be happening. Silence says more than words, pay attention to it.


The Tao of Teaching

- Allow time for genuine insight.
- Instead of trying hard, be easy; teach by example, and more will happen.
- If you measure success in terms of praise and criticism, your anxiety will be endless.
- Any over-determined behavior produces its opposite.

Consultative Teachers



- Co-learner, mentor, tour guide, facilitat...
- Student and problem-centered
- Learner is a growing tree and on a journey
- Knowledge is constructed and intertwined
- Many resources (including texts & teachers)
- Authentic, collaborative, real-world tasks
- Subjective, continual, less formal assess
- Display student ideas--proud and motivated
- Build CT, CR, CL skills

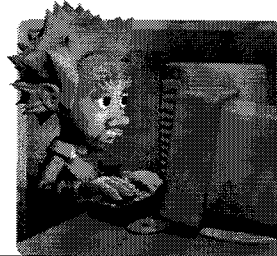


Students are too often...

- Emotionally moody and sleepy
- Preoccupied with previous class or hour
- Expecting entertainment
- Unable to concentrate for too long
- Isolated or alienated



Theoretical Perspectives and Principles



1. Instructional Philosophy and Approaches

- Decisions about approach (behavioral, constructivist, inquiry)
- Battle between constructivism and behaviorism
- Battle between student centered or instructor-centered



2. Robert Gagne's 9 instructional events

- | | |
|--------------------------------------|--|
| gaining attention | → show variety of computer generated triangles |
| informing learners of the objective | → "What is an equilateral triangle?" |
| stimulating recall of prior learning | → review definitions of triangles |
| presenting the stimulus | → give definition of equilateral triangle |
| providing learning guidance | → show example of how to create equilateral |
| eliciting performance | → ask students to create 5 different examples |
| providing feedback | → check all examples as correct/incorrect |
| assessing performance | → provide scores and remediation |
| enhancing retention and transfer | → show pictures of objects and ask students to identify equilaterals |

From <http://ip.psychology.org/gagne.html>

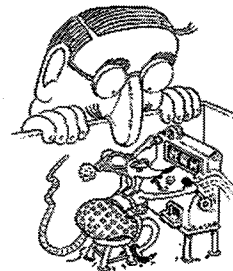
3. Skinner (1904-1990) Quote.

- I did not direct my life. I didn't design it. I never made decisions. Things always came up and made them for me. That's what life is.



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Behaviorist Interactivity



4. Learner-Centered Learning Principles (American Psychological Association, 1993)

Cognitive and Metacognitive Factors **Developmental and Social Factors**

- | | |
|-----------------------------------|--|
| 1. Nature of the learning process | 10. Developmental influences on learning |
| 2. Goals of the learning process | 11. Social influences on learning |
| 3. Construction of knowledge | |
| 4. Strategic thinking | |
| 5. Thinking about thinking | |
| 6. Context of learning | |
- Individual Differences**
- | |
|--|
| 12. Individual differences in learning |
| 13. Learning and diversity |
| 14. Standards and assessment |

Motivational and Affective Factors

- | |
|--|
| 7. Motivational and emotional influences |
| 8. Intrinsic motivation to learn |
| 9. Effects of motivation on effort |



5. Active Learning Principles

1. Authentic/Raw Data
2. Student Autonomy/Inquiry
3. Relevant/Meaningful/Interests
4. Link to Prior Knowledge
5. Choice and Challenge
6. Teacher as Facilitator and Co-Learner
7. Social Interaction and Dialogue
8. Problem-Based & Student Gen Learning
9. Multiple Viewpoints/Perspectives
10. Collab, Negotiation, & Reflection



Connections New Theories

- **Constructivism**--concerned with learner's actual act of creating meaning (Brooks, 1990). The constructivist argues that the child's mind actively constructs relationships and ideas; hence, meaning is derived from negotiating, generating, and linking concepts within a community of peers (Harel & Papert, 1991).

6. Constructivistic Teaching Principles (Brooks, 1990)

1. Build on student prior knowledge.
2. Make learning relevant.
3. Give students choice in learning activity.
4. Student autonomy & active learning encouraged
5. Use of raw data sources & interactive materials
6. Encourage student dialogue
7. Seek elaboration on responses and justification
8. Pose contradictions to original hypothesis
9. Ask open-ended questions & allow wait time
10. Encourage reflection on experiences



Connections New Theories

- **Situated Learning**--asserts that learning is most effective in authentic, or real world, contexts with problems that allow students to generate their own solution paths (Brown, Collins, & Duguid, 1989).

PBL (Blumenfeld et al., 1991; Savery & Duffy, 1996)

1. Anchor in larger task or problem
2. Develop learner ownership over the problem
3. Design authentic tasks
4. Tasks should reflect real world complexity
5. Learners must own the solution path/processes
6. Support and challenge learners
7. Encourage testing against alternative views
8. Encourage reflection on learning content and process
9. Novelty, Variety, Valued problems, Choice

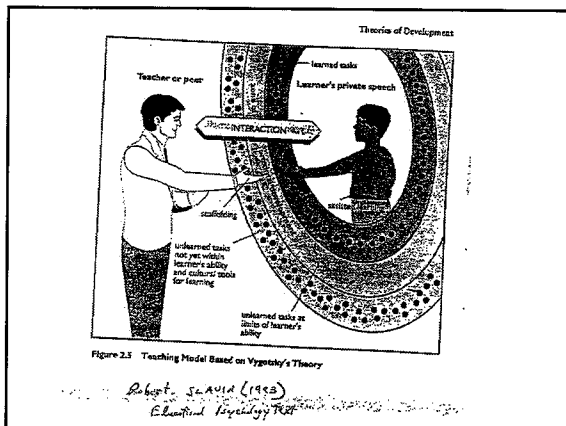
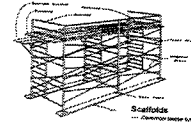
7. Sociocultural Ideas (Bonk & Cunningham, 1998)



1. Shared Space and Build Intersubjectivity
2. Social Dialogue on Authentic Problems (mind is in social interactions and extends beyond skin)
3. Mentoring and Teleapprenticeships
4. Scaffolding and Electronic Assistance in ZPD
5. Group Processing and Reflection
6. Collaboration and Negotiation in ZPD
7. Choice and Challenge
8. Community of Learning with Experts & Peers
9. Portfolio Assessment and Feedback
10. Assisted Learning (e.g., task structuring)
11. Reciprocal Teaching & Peer Collaboration

8. Types of Scaffolding (Bonk et al., 2001)

- Social Acknowledgement
- Questioning
- Direct Instruction
- Modeling/Examples
- Feedback/Praise
- Cognitive Task Structuring
- Cognitive Elaborations/Explanations
- Push to Explore
- Fostering Reflections/Self Awareness
- Encouraging Articulation/Dialogue Prompting
- General Advise/Scaffolding/Suggestions
- Management



9. Resources in a Learning Environment

- Teachers
- Peers
- Curriculum/Textbooks
- Technology/Tools
- Experts/Community
- Assessment/Testing
- Self Reflection
- Parents



10. Fundamental Principles of Learning (Kahn, 1993)



1. Learning is social
2. Knowledge is integrated into life of community
3. Learning is an act of membership
4. Knowing in engagement in practice
5. Engagement & empowerment are linked
6. Failure to learn results from exclusion from practice
7. We have a society of lifelong learners

Changes in College Campuses Today???





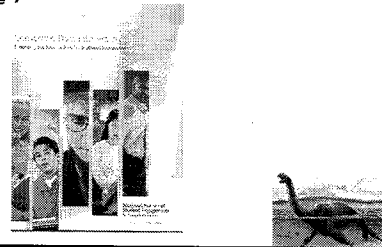
What *Really* Matters in College: Student Engagement

"The research is unequivocal: students who are actively involved in both academic and out-of-class activities gain more from the college experience than those who are not so involved."

Ernest T. Pascarella & Patrick T. Terenzini, How College Affects Students

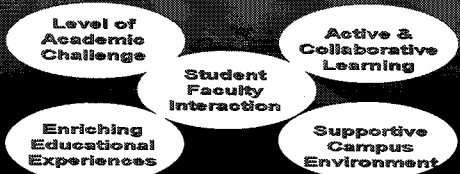
National Survey of Student Engagement *(pronounced "nessie")*

Community College Survey of Student Engagement *(pronounced "sessie")*



Benchmarks of Effective Educational Practice (George Kuh, Indiana University)

NSSE Benchmarks



Active and Collaborative Learning

Students learn more when they are intensely involved in their education and are asked to think about and apply what they are learning in different settings. Collaborating with others in solving problems or mastering difficult material prepares students to deal with the messy, unscripted problems they will encounter daily during and after college.

Active and Collaborative Learning

7 questions:

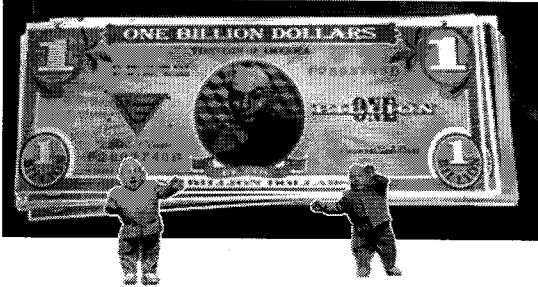
- Asked questions in class or contributed to class discussions
- Made a class presentation
- Worked with other students on projects during class
- Worked with classmates outside of class to prepare class assignments

Active and Collaborative Learning

7 questions:

- Tutored or taught other students
- Participated in a community-based project as part of a regular course
- Discussed ideas from your reading or classes with others outside of class (students, family members, co-workers, etc.)

Ok, Million Dollar Question: What do you know about collaborative and cooperative learning?



Cooperative and Collaborative Rationale

- Higher student-teacher interaction
- Increases feedback
- Links new info to prior knowledge
- Enhances perspective taking
- Utilizes resources better
- Teacher as mentor and co-learner
- Joint products and ownership
- Instills more risk taking
- Facilitates problem solving

Definitions

- **Cooperative Learning = work toward common goal and understanding same material**
- **Collaborative Learning = use different skills or expertise to complete a task**

Collaborative Learning

- Get more complex later in course
- Have examples from prior semesters
- Bring in prior students to discuss how well it worked
- Print or publish the final products and celebrate success
- Think about international collaborations

Instructor Roles in Collaborative and Cooperative Learning

- Guide, assist, dialogue, clarify, feedback, question, push
- Elaborate, summarize, hint, cue, think sheets, think aloud
- Structure and restructure groups
- Mentor, friend, co-learner
- Help with group processing

Key People in Field of Cooperative learning

- Robert Slavin, Johns Hopkins University: STAD and TGT approaches (basic skills)
- David and Roger Johnson, University of Minnesota: learning together approach (problem solving)
- Spencer Kagan, Kagan Cooperative Learning: structures approach (simple and easy to use)
- Elliott Aronson: Jigsaw approach (perspective taking, problem solving))
- Sharon and Sharon: Group investigation approach (inquiry, depth, social skills)

Cooperative Learning Principles

- 1. Positive Interdependence**
- 2. Individual Accountability**
- 3. Group Processing**
- 4. Social Skills and Trust**
- 5. Face-to-Face Interaction**

1. Building Positive Interdependence (sink or swim together)

- **Goals:** All have same goal: one team product or report
- **Rewards:** Team recognition based on all contributions
- **Task:** Division of labor, mini-topics, need 8 hands to complete
- **Resources:** 1 person has paper, another has the markers, etc.
- **Roles:** Question asker, recorder, checker. Taskmaster, encourager, leader

2. Building Individual Accountability

- Pick our students at random
- Everyone certifies correctness
- Assign jobs to each student
- Color code each person's work
- Teach scores based on individual scores
- Have students reflect and summarize their progress

3. Group Processing

- Need time to reflect and analyze what they have accomplished and how well working together.
- Students need feedback from instructors on their processing.
- Should pause to reflect every so often.
- Perhaps use an observation sheet for feedback.

4. Building Social Skills and Trust and Group Bonding

- Where were you born?
- Favorite movie, music group, color
- I wish I had a second change at?
- A job I would love is...
- Where born, hobbies, interests, pet
- Birthday, sign, etc.
- Proudest accomplishment, goals, etc.
- Other social ice breakers...

4 F's

- **Forming:** Organize and establish groups
- **Functioning:** Manage, implement, support, motivate, and accept
- **Formulate:** Understand, review, learn new strategies
- **Fermenting:** Disagreement, controversy, alternatives answers

Grouping Strategies

- **Young:** student choice, last name, food preferences, birthday, color of clothes
- **Older:** goals, jobs, location, experience, familiarity with task

Grading Strategies

- Grade test performance individually
- Group grades for group processes
- Avoid group competition
- Have all group members sign reports

Reaching Difficult Students

- Keep groups small (2-3 members)
- List who would work with
- Incorporate student interests into task
- Evaluate individually, but bonus pts to grp
- Give responsibility
- Give points for certain behaviors sought
- Celebrate success of that group
- Move student to spotlight
- Distract student with a question

Pedagogical Strategies: Cooperative Learning

1. Starter-Wrapper Discussions (with roles)
2. Turn to Your Partner: Quizzes, Top Tens
3. Value Line and Graphs
4. Roundrobins and Roundtables
5. Synchronous Guest Conferencing
6. Structured Controversy
7. Jigsaw, Group Investigation, PBL
8. Gallery Tours of Student Work
9. Panel Discussions/Symposia
10. Case Creation and Replies



COOPERATIVE LEARNING Generic Strategies: Well Known

- STAD, TGT, Jigsaw, Group Investigation
- Think-Pair-Share, turn to your neighbor
- Numbered Heads Together
- Gallery Tours
- Stand and Share
- Response value lines
- Group discussion with roles
- Test reviewers, homework checkers

COOPERATIVE LEARNING Generic Strategies: Quick Starters

- Simultaneous Numbered Heads with sharing
- Team concept or word webbing
- Team brainstorming
- Talking Chips
- Team Reunions
- Corners
- Interviews and sharing

**COOPERATIVE LEARNING Generic
Strategies: Discussion/Small
Group Work Alternatives**

- Group discussion: pool ideas
- Buss group: small 4-6 people & then class
- Panel discussions: 4-8 people discuss topic
- Symposium: disc in phases by series of experts
- Debates: pro& con on a controversial issue
- Reaction sheets: Group reacts on predetermined controversial idea
- Role Play: act out situation with roles

**COOPERATIVE LEARNING
SPECIFIC: Reading**

- READER, READERS
- CIRC
- Reciprocal Teaching
- Group Reading with Different Purposes
- Structured Controversy
- Cooperative Scripts and MURDER

**COOPERATIVE LEARNING
SPECIFIC: Writing**

- Database creation
- Peer editing and reviewers
- Publish class projects as a book
- Class critiques and thought papers
- Class Newsletters
- Class conference proceedings and journal
- Other local publishing

**Recommended Introduction
of a Collaborative Method**

- Introduce it
- Explain the purpose
- Teacher and peer modeling
- Guided interaction and use
- Diagnose misunderstandings
- Internalization and ownership
- Instructor feedback and assistance as needed

Task Roles

- Reading: reader, materials handler, checker, summarizer, praiser, elaboration seeker, facilitator
- Writing: executive director, reporter, author, proofreader, co-author, editor
- Computer: keyboarder, recorder, reporter, praiser, checker, summarizer, encourager
- Journal Project: editor, writers, scanner, coordinator, etc.

Role Play...



Role 1: Starter/Mediator Reporter/Commentator



- Summarizes the key terms, ideas, and issues in the chapters, supplemental instructor notes, journal articles, and other assigned readings and asks thought provoking questions typically before one's peers read or discuss the concepts and ideas. In effect, he/she points out what to expect in the upcoming readings or activities. Once the "start" is posted, this student acts as a mediator or facilitator of discussion for the week.

Role 2: Wrapper/Summarizer Synthesizer/Connector/Reviewer



- Connects ideas, synthesizes discussion interrelates comments, and links both explicit and implicit ideas posed in online discussion or other activities. The learner looks for themes in online coursework while weaving information together. The wrapping or summarizing is done at least at the end of the week or unit, but preferably two or more times depending on the length of activity.

Role 3: Conqueror or Debater/Arguer/Bloodletter



- Takes ideas into action, debates with others, persists in arguments and never surrenders or compromises nomatter what the casualties are when addressing any problem or issue.



Role 4: Devil's Advocate or Critic/Censor/Confederate

- Takes opposite points of view for the sake of an argument and is an antagonist when addressing any problem posed. This might be a weekly role that is secretly assigned.



Role 5: Idea Squelcher/Biased/Preconceiver

- Squelches good and bad ideas of others and submits your own prejudiced or biased ideas during online discussions and other situations. Forces others to think. Is that person you really hate to work with.



Role 6: Optimist/Open- minded/Idealist

- In this role, the student notes what appears to be feasible, profitable, ideal, and "sunny" ideas when addressing this problem. Always sees the bright or positive side of the situation.



**Role 7:
Emotional/Sensitive/Intuitive**

- Comments with the fire and warmth of emotions, feelings, hunches, and intuitions when interacting with others, posting comments, or addressing problems.



**Role 8: Idea Generator
Creative Energy/Inventor**

- Brings endless energy to online conversations and generates lots of fresh ideas and new perspectives to the conference when addressing issues and problems.



**Role 9:
Questioner/Ponderer/Protester**

- Role is to question, ponder, and protest the ideas of others and the problem presented itself. Might assume a radical or ultra-liberal tone.



**Role 10: Coach
Facilitator/Inspirer/Trainer**

- Offers hints, clues, supports, and highly motivational speeches to get everyone fired-up or at least one lost individual back on track when addressing a problem or situation.



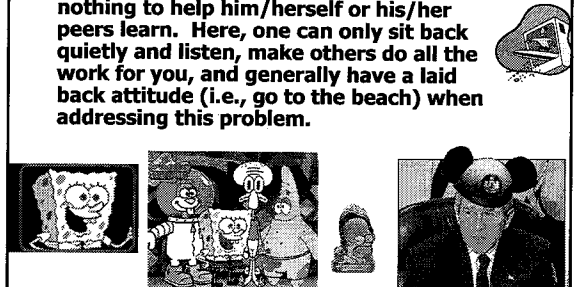
**Role 11: Controller/Executive
Director/CEO/Leader**

- In this role, the student oversees the process, reports overall findings and opinions, and attempts to control the flow of information, findings, suggestions, and general problem solving.



**Role 12:
Slacker/Slough/Slug/Surfer Dude**

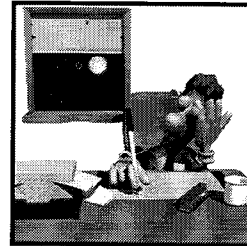
- In this role, the student does little or nothing to help him/herself or his/her peers learn. Here, one can only sit back quietly and listen, make others do all the work for you, and generally have a laid back attitude (i.e., go to the beach) when addressing this problem.



100 Engaging Collaborative and Active Learning Ideas



Ok, who is falling asleep and needs a little chocolate?



Did he say chocolate?

Who wants some chocolate???



1. Structured Controversy Task

- Assign 2 to pro side and 2 to con side
- Read, research, and produce different materials
- Hold debate (present conflicting positions)
- Argue strengths and weaknesses
- Switch sides and continue debate
- Come to compromise

2. Reciprocal Teaching Scripts

- Instructor gives purpose of the method (e.g., summarization, prediction, clarification, and questioning skills)
- He/she models the method
- Student takes over as the teacher
- Student teacher models skills requested

3. Cooperative Learning Scripts

- Read same passage
- Put out of sight
- One person is summarizes and the other tries to correct any errors
- Both work together to learn the information
- Read 2nd passage and change roles

4. Cooperative Teaching Scripts

- Read different passages
- Put out of sight
- One person summarizes the content of first passage and the other asks clarifying questions
- Work together to develop analogies, images, etc. to learn
- Repeat steps for other article
- Read passage that did not read

5. READER/READERS (Clark & Bonk, 1992)

- Review why you are about to read.
- Explore passage for main ideas.
- Ask questions about the main ideas.
- Draw conclusions.
- Evaluate your responses.
- Read for answers and summarize main ideas.

- Other similar strategies include paired repeated reading, paired reading, Cooperative Integrated Reading and Composition (CIRC) Program, reciprocal teaching, cooperative scripts.

6. Numbered Heads Together

- Count off 1, 2, 3, 4 in each group.
- Instructor can call on a number within a group to respond or all people with a certain number to respond.
- Increases accountability.

7. Human Graph

- **Class lines up:**
(1-5)
1 = Strongly agree,
3 = neutral,
5 = strongly disagree
- e.g., this workshop is great!

8. Value Lines

- Pose question or issue
- Students mark down their feelings or votes
- Share votes and rationale with class
- Recast votes

9. Think-Pair-Share or Turn To Your Partner and Share

- Pose a question, issue, activity, etc.
- Students reflect on it.
- Then they share views with assigned partner.
- Share with class.

