

August 28, 2021, Week 1: Education 3.0 and R2D2 & TEC-VARIETY Models
R546: Instructional Strategies for Thinking, Collaboration, and Motivation
Instructor: Curt Bonk, Indiana University

Week 1 Agenda:

1. Marker board activity (6 minutes). **Task:** Fill the board with pedagogical ideas (labels and initials).
 - a. Center marker board: Creativity theory/ideas, Creativity strategies
 - b. Right marker board: Critical theory/ideas, Critical thinking strategies
 - c. Left marker board: Motivation theory/ideas, Motivation strategies
 - d. Back marker board: Cooperative/Collab learning theory/ideas; Collab strategies
2. Circle back through the board and check things you agree with (Bonk to discuss).
3. Phillips 66 + 3T: **Table Top Talking (3T):** Lord of the Rings Tables (Pick a name: the Giants, Eagles, Wolves, Gollums, Ents (Tree-like creatures), Dwarfs, Dragons, Wizards, Elves, Orcs, Humans, and Sorcerers and the Dark Lords): 4-6 per table for 6 minutes: 1-2 Visiting Scholars; 2-3 enrolled students (and 1 group leader)
 - a. Give your group a name (pick from the above).
 - b. Brainstorm in groups your prior knowledge about instructional strategies.
 - c. Roundtable: Everyone lists a strategy and explains it and pass the paper.
 - d. Assign group leader to write down key points.
 - e. Add to 5-10 items to the board (include group name).
 - f. Summarize as a class.
4. Phillips 66 Part 2: What do you already know about R546 content and the syllabus?
 - a. Brainstorm in groups your prior knowledge about this class.
 - b. Assign group leader to write down key points
 - c. Add to 5-10 items to the board.
 - d. Present results in team competitions.
 - e. Summarize as a class.
5. Bonk to briefly explain the syllabus and agenda (15 minute cap).
 - a. Course history.
 - b. Course texts.
 - c. Book of Readings PDF.
 - d. Book recommendations.
 - e. Guest speaker(s).
 - f. Fall break.
 - g. Online Website demonstration.
 - h. Course goals: creative inspiration, innovation, mushy brain, labels, integration.
 - i. Student questions and discussion.
6. Kahoot quiz review
7. Introduce participants:
 - a. Visiting scholars
 - b. Prior students...current students...
 - c. Others.
8. Comedy: Three things you know about the syllabus and this course.
9. **Break #1...(Book Selections)**
10. Brainstorm: What is Education 3.0?

11. Curt Bonk presents on Education 3.0 and Education 20/20
 - a. Complete Bingo board #1
- 12. Break #2 (brief)**
13. Curt Bonk to recap some of 100+ instructional strategies (actually 40+).
 - a. Discussion and class activities and demonstrations.
 - b. Reflection: 3 best.
 - c. Complete back of Bingo Board #1...
14. Ball toss: Name a strategy or activity.
- 15. Break #3 (more book selections)**
16. Curt Bonk to present 20 more pedagogical activities and ideas
17. Bonk to present his R2D2 model and newest examples and ideas.
 - a. Bingo game #2.
 - b. Student questions and discussions.
 - c. Find 1-2 resources mentioned...
18. Bonk to present his TEC-VARIETY model and newest examples and ideas.
 - a. Back of Bingo game #2.
 - b. Any questions?
 - c. Find online resources mentioned.
19. Say goodbye! Say Goodbye Song!
20. For next week...

**September 4, 2021, Week 2: More Education 3.0 and Course Activities Recap and
Cooperative Learning Basics**
R546: Instructional Strategies for Thinking, Collaboration, and Motivation
Instructor: Curt Bonk, Indiana University

Week 2 Agenda:

1. Brainstorm: What is Education 3.0?
 - a. Right marker board: What is Education 3.0? Principles? Questions?
 - b. Center board: What do you remember about 20 instructor roles? Any examples?
 - c. Left board: What do you remember about 20 LAST principles of instruction?
 - d. Back marker board: What do you remember about the 40 instructional strategies presented near the end of last week?
 - e. Circle back through the board and check things you agree with or remember.
2. Return to 5 Lord of the Rings Tables (Ents, Gollums, Wizards, Humans, Dark Lords, Dragons?): (and 1 group leader)
3. Phillips 66: Six minutes discuss what remember from last time about Education 3.0 talk.
 - a. Flip Chart Paper Activity: So what is Education 3.0?
 - b. Post the flip chart paper on the board.
 - c. Numbered Heads Together activity
4. Curt Bonk to present 50+ more pedagogical activities and ideas (e.g., Planted questions, Little known fact activity, Talking String, Human graph, Psychic massage, Creative dramatics, Stand and share, Three word activity, One Stay, Three Stay, Reverse Brainstorming, Talking String, Just in Time Teaching, Goals and Expectations, One Visual, 8 Nouns Activity, etc.)
 - a. Can Definitely Use, Might Use, Can't Use
 - b. Best 3 Activity
 - c. Ball toss: Name a strategy or activity.
 - d. Yellow stickies on best 3
- 5. Break #1**
6. Curt Bonk to present his R2D2 model and newest examples and ideas.
 - a. Bingo game #2.
 - b. Student questions and discussions.
 - c. Find 1-2 resources mentioned...
7. Bonk to present his TEC-VARIETY model and newest examples and ideas.
 - a. Back of Bingo game #2.
 - b. Any questions?
 - c. Find online resources mentioned.
- 8. Break #2**
9. Marker board activity. Task: Fill the board with pedagogical ideas (labels and initials).
 - a. Center marker board: R2D2 principles and theory
 - b. Right marker board: R2D2 strategies and ideas
 - c. Left board: TEC-VARIETY motivational principles (i.e., what does it stand for?)
 - d. Back board: TEC-VARIETY strategies and ideas
 - e. Circle back through the board and check things you agree with.
10. What do you already know about R2D2 and TEC-VARIETY?
 - a. What do you already use or know?
 - b. Add to 5-10 items to the board.
- 11. Bonk to present on Cooperative and Collaborative Learning**

12. Break #3...

13. Videotape: Cooperative learning or Jigsaw
 - a. David Johnson on CL: <https://www.youtube.com/watch?v=Sf1AH5WleEI>
 - b. Roger Johnson on CL: <https://www.youtube.com/watch?v=bL3oJDLpc6M>
 - c. Elliot Aronson: Jigsaw classroom: <https://www.youtube.com/watch?v=2p1AE3Z3j5I>
 - d. CL Deeper Edutopia https://www.youtube.com/watch?v=rWEwv_qobpU
 - e. Plan future: <https://www.teachingchannel.org/videos/collaborative-learning-strategy>
14. Cooperative Teaching Script activity
 - a. **Group 1:** Basic Elements: p. 410 and Cooperative Learning Summary: p. 509
 - b. **Group 2:** Differences cooperative learning and traditional p. 405 and p. 408
 - c. **Group 3:** What is cooperative learning? pp. 406-407
 - i. Rotate outside to Table 1, Table 2, or Table 3
 - ii. Return to teach your group what you learn
 - iii. Report back to the class.
15. Say goodbye! Say Goodbye Song!
16. Review items in the Packet of handouts

September 11, 2021, Week 3: Cooperative Learning Basics
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Instructor: Curt Bonk, Indiana University

Week 3 Agenda:

1. Marker board activity. Task: Fill the board with pedagogical ideas (labels and initials).
 - a. Center marker board: R2D2 principles and theory
 - b. Right marker board: R2D2 strategies and ideas
 - c. Left board: TEC-VARIETY motivational principles (i.e., what does it stand for?)
 - d. Back board: TEC-VARIETY strategies and ideas
 - e. Circle back through the board and check things you agree with.
 - f. Massive Recap Review: (Ents, Gollums, Wizards, Humans, Dark Lords, Dragons?)
2. Groups Discuss 40+ (40) strategies and R2D2 and TEC-VARIETY models.
 - a. Sticky note recap review (individual)
 - b. 10 strategies can use (individual)
 - c. Select “Best 3” could teach today.
 - d. Any variations?
 - e. Discussion, comments, and questions.
3. Dr. Bonk to present on Cooperative and Collaborative Learning
 - a. Popplet on cooperative and collaborative learning: <http://popplet.com/app/#/2039068>
4. **Break #1**
5. Dr. Bonk to continue to present on Cooperative and Collaborative Learning
6. Videotape: Cooperative learning or Jigsaw
 - a. David Johnson on CL: <https://www.youtube.com/watch?v=SfIAH5WleEI>
 - b. Roger Johnson on CL: <https://www.youtube.com/watch?v=bL3oJDLpc6M>
 - c. Elliot Aronson: Jigsaw classroom: <https://www.youtube.com/watch?v=2p1AE3Z3j5I>
 - d. CL Deeper Edutopia https://www.youtube.com/watch?v=rWEwv_qobpU
 - e. Plan future: <https://www.teachingchannel.org/videos/collaborative-learning-strategy>
7. **Break #2...**
8. Cooperative Teaching Script activity (count off: 1, 2, 3, 4, 5, 6)
 - a. **Group 1:** Basic Elements: p. 410 and Cooperative Learning Summary: p. 509
 - b. **Group 2:** Differences cooperative learning and traditional p. 405 and p. 408
 - c. **Group 3:** What is cooperative learning? pp. 406-407
 - i. Rotate outside to Table 1, Table 2, Table 3, Table 4, Table 5, and Table 6
 - ii. Discuss your handout.
 - iii. Merge tables 1 and 2; Merge 3 and 4; Merge 5 and 6.
 - iv. Discuss your combined handout.
 - v. Return to class to teach your group what you learn
 - vi. Report back to the class.
9. Review items in the Packet of handouts
10. Cooperative Learning Overview (include review of handouts in packet of readings):
 - a. PIGS Face (p. 409); CL Pondering Questions (p. 404)
 - b. Generic Methods (p. 399): **Stand, Raise Hand, Leg, etc. and Admit**
 - c. Building Positive Interdependence and Individual Accountability
 - d. Building Social Skills and Trust (4 F's) (pp. 430-435): Trust or group bonding: How do you create it? (favorite restaurant, pet type, relative, proudest accomplishment, if I were rich, a good movie, best part-time job, travel)

- e. Grouping Strategies (p. 416); Group Processing; Grading Strategies; Reaching Diff.
11. **Review of Key Pts: in book you read (so far) (Three Step Interviews)**
 - a. Line up by date born. Pair up and group by month born.
 - b. In pairs, interview partner for 5 minutes (max) and jot down note:
 1. What is important about this book?
 2. What is interesting?
 3. What is a dumb idea? (p. 526 & p. 528)
 - c. Reverse roles (for another 5 minutes)
 - d. Pairs join to form groups of four
 - e. Roundrobin sharing what you learned in the interview
 - f. Alt: Jigsaw into various chapter expert groups and summarize main pts.
 12. **Break #3**
 1. Cooperative Learning Specific:
 - a. Reciprocal Teaching Part 1: <https://www.youtube.com/watch?v=8oXskcnb4RA>
 - b. Reciprocal Teaching Part 2: <https://www.youtube.com/watch?v=e8gSIcSyyPk>
 - c. Students Take Charge: RT: <https://www.youtube.com/watch?v=My68SDGeTHI>
 - d. Using Higher-Order Questions: Interview Annemarie Palincsar: <https://www.youtube.com/watch?v=XZ4LFXGi0mI>
 - e. Reciprocal Tchg Activity (Roles: Tchr, #1, #2, #3, #4, Jim, Barbara...) p. 458-459
 13. Project-Based Learning
 - a. Intro to PBL (Edutopia): https://www.youtube.com/watch?v=dFySmS9_y_0
 - b. 5 keys to PBL: https://www.youtube.com/watch?v=hnzCGNnU_WM
 - c. Picture possibilities (California): <https://www.youtube.com/watch?v=EFt6qW0Pb4c>
 - d. PBL Start to finish: <https://www.youtube.com/watch?v=-OWX6KZQDoE>
 2. **Structured Controversy Task**
 - f. You will be assigned to 1 of 4 groups (Group by car drive). Prepare to make 3-4 arguments for the position you have been given using your text, lecture, and video.
 - i. Reciprocal teaching gives too much power to the learners
 - ii. PBL gives too much focus on learners and not enough on teachers.
 - iii. Create a controversy...
 - e. Students
 - f. Quiz on cooperative learning from packet of handouts (p. 404 and p. 413).
 14. **Solid vs. Fuzzy about PBL in Groups of Four**
 - a. Three Stay, One Stray--Buzz Groups--Roundtable.
 - b. Alt #1: #d Heads Together (Count off 1, 2, 3, 4) & Roundrobin & Blackboard Share.
 15. 13 Reading assignments: pp. 449-452.
 - a. Read, Summarize, and Discuss: Convince others that yours is best.
 - b. Game #6: Group Grope perhaps on Project-Based Learning
 - c. Coop reading with different purposes: teacher, parent, principal, student
 16. Simple Structures: circle those you have used or know about...(pp. 490-499)

September 18, 2021, Week 4: Critical Thinking (and end Coop Learning)
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Week 4 Agenda:

1. Administrivia: Dress culturally or different day is next week--wear something from your homeland, something nifty or cute, favorite clothes, something old or from another age.
2. Plan for Week 8 and Task #1 and Task #2 are due today (or 4 days from now).
3. Pre-class Board Game and Warm-up activity:
 - a. **Right board:** PBL is highly beneficial
 - b. **Right board:** PBL has problems (i.e., too much focus on learners and not enough on teachers; etc.)
 - c. **Back board:** Aspects or principles of project-based learning (PBL)?
 - d. **Left board:** Value Line: Rate your organization, university, or school administrators support or interest in PBL
4. Project-Based Learning and Collaborative Learning
 - a. 5 keys to PBL (Peg Ertmer): https://www.youtube.com/watch?v=hnzCGNnU_WM
 - b. Picture possibilities (California): <https://www.youtube.com/watch?v=EFt6qW0Pb4c>
 - c. Intro to PBL (Edutopia): https://www.youtube.com/watch?v=dFySmS9_y_0
 - d. PBL Start to finish: <https://www.youtube.com/watch?v=-OWX6KZQDoE>
5. **Structured Controversy Task:** The Great Debate
 - i. PBL gives too much focus on learners and not enough on teachers.
 - ii. PBL is highly effective
 - iii. Reciprocal teaching gives too much power to the learners
 - iv. Reciprocal teaching is highly effective
6. **Solid vs. Fuzzy about PBL in Groups of Four**
 - a. Three Stay, One Stray--Buzz Groups--Roundtable.
 - b. Alt #1: #d Heads Together (Count off 1, 2, 3, 4) & Roundrobin & Blackboard Share.
7. 13 Reading assignments: pp. 449-452.
 - a. Read, Summarize, and Discuss: Convince others that yours is best.
 - b. Game #6: Group Grope perhaps on Project-Based Learning
 - c. Coop reading with different purposes: teacher, parent, principal, student
8. Simple Structures: circle those you have used or know about...(pp. 490-499)
9. Two Notecards: 1 with questions about cooperative learning. 1 with controversial issues.
10. Collaborative and Cooperative Learning Review quiz (bells and whistles)...
11. **Break #1**
 - a. **Left board:** Value Line: Rate your organization, university, or school administrators support or interest in creative thinking, critical thinking, and cooperative learning.
12. **Low Medium High**

1-2-3-4-5-6-7-8-9-10	1. Creative Thinking
1-2-3-4-5-6-7-8-9-10	2. Critical Thinking
1-2-3-4-5-6-7-8-9-10	3. Cooperative Learning
13. **Bonk to lecture on critical thinking (pp. 293-294; 358-362).**
 - a. Key aspects of critical thinking; 8 ways to fail; Critical Thinking Defined; 6 Aspects of Critical Thinking; Highlights from the CT research

14. **CT Videos:**
 - Video #1: Critical Thinking Series:** <https://www.youtube.com/watch?v=GzV1pNQUX5s>
 - Video #2: Critical Thinking:** <https://www.youtube.com/watch?v=J0yEAE5owWw>
 - Video #3: Critical Thinking:** <https://www.youtube.com/watch?v=6OLPL5p0fMg>
15. Fat and Skinny Questions: discuss/explain (page 311-312)
 - (Note: Think Sheets, Procedural Facilitation, Guided Questions)
 - Fat Questions: require lots of discussion and explanation with interesting examples and take time to think through and answer in depth.
 - Skinny Q's: require simple yes/no/maybe or a 1 word answer or nod or head shake and take
16. Critical thinking Checklist and Definition
17. **Break #2**
18. Evaluation Questions, Blooms Taxonomy, Think Sheets, Procedural Facilitation, Guided Questions
 - a. Bloom: p. 313-314
 - b. Think sheet questions: p. 315-317
19. PMI on the video
20. K-W-H-L/K-W-L (What did you know?, What do you want to know?, What did you learn?)-
21. Force Field Analysis: Your final assignment (p. 320-325)
22. Summing Up, Minute papers revisited
23. **Break #3**
24. Idea Listing Activities (many are Edward de Bono's Methods)
 1. **APC: Alt's, Possibilities, & Choices (The tasks) (This is CR BS!)**
 2. FIP: First Important Priorities (e.g., what tasks to do for this class)
 3. AGO: Aims, Goals, Objectives
 4. OPV: Other People's Views
 5. **C&S: Consequence & Sequel (of an action or decision)**
 6. CAF: Considering All Factors: (a) Buying a second hand car, (b) Choosing a place to live.
 7. FI - FO: Info In (Already accounted for) - Info Out (Unknown/still needed)
 8. EBS: Examining Both Sides of an Argument
 9. ADI: Agree, Disagree, Irrelevant

September 25, 2021, Week 5: Critical Thinking Defined and Explained
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Week 5 Agenda:

1. Administrivia #1: Return Task #1 and Task #2.
2. Administrivia #2: Bring a hat next time (if you can).
3. Today: Dress culturally/differently sharing
4. Writing warm-up: Count off 1, 2, 3, 4.
 - a. **Person #1 (red name tags):** Minute papers what learned last week.
 - b. **Person #2 (yellow name tags):** Muddiest point papers on last week.
 - c. **Person #3 (green name tags):** Plus, Minus, Interesting on last week.
 - d. **Person #4 (blue name tags):** K-W-L on last week. (What did you know?, What do you want to know?, What did you learn?)
5. Bonk Lecture: Finish module on critical thinking
6. PMI on the video on creative thinking
7. Force Field Analysis: Your final assignment (p. 320-325)
8. Reflection on Idea Listing Activities (count off 1 to 9): Who in your group is facing an important decision (e.g., wedding, move, new purchase, house, car, career/major, etc. (many are Edward de Bono's Methods; p. 335)
 - 1's. Happy: APC: Alternatives, Possibilities, & Choices (The tasks)
 - 2's. Sleepy: FIP: First Important Priorities (e.g., what tasks to do for this class)
 - 3's. Doc: AGO: Aims, Goals, Objectives
 - 4's. Bashful: OPV: Other People's Views
 - 5's. Grumpy: CAF: Considering All Factors: (a) Buying 2nd hand car, (b) Choosing a place to live.
 - 6's. Happy: FI - FO: Info In (Already accounted for) - Info Out (Unknown/still needed)
 - 7's. Sneazy: EBS: Examining Both Sides of an Argument
 - 8's. Dopey: Consequence and Sequel (of an action or decision): short term, midterm, and long-term
 - 9's. Snow White: ADI: Agree, Disagree, Irrelevant
9. Evaluative Questions:
 - a. Case A (IU-B): Higher Ed considering funding a CR/CT center
 - b. **Case B (IUS and IUPUI): High School is considering a course on CT & CR thinking**
10. Critical thinking tests and assessments
 - a. Cornell Test of Critical Thinking (see handout)--Try questions 1-10.
 - b. A Disposition Inventory: p. 366
 - c. Picture completion; p. 363-365
11. **Break #1**
12. SWOT Options (p. 329):
 - a. Dedicated blended IST master's program in Singapore;
 - b. Virtual/online IST master's program with China;
 - c. New requirement: all IU graduate students who want to teach in college must take R546;
 - d. Creation of a new center called GET-IT or Center for "Globally Enhancing Thinking, Instructional, and Technology."
13. Visual Thinking Activities and Graphic Organizers (pp. 351-357)
 - a. Cmaps, diagrams, flowcharts, graphs, attribute wheels
 - b. Venn Diagrams (e.g., compare CR & CT)

- c. Categorization/Classification Schemes:
 - d. Taxonomies, timelines, outlines, advance organizers, main idea tables
 - e. Semantic Feature Analysis: (e.g., 12 or 14 LCPs by grade or domain)
 - f. Mnemonics--acrostics, acronyms, pegword, story, link, keyword, bizarre
14. Nominal Group Process: You are a commissioned team looking at building a third wing in the School of Education. The overall budget is \$15,000,000; you have been given \$2.5 million from the discretionary budget to spend. What should go in there? (p. 318)
 15. Goal Concretization, p. 334
 16. Working Backward, Pruning the tree activity: I am thinking of a critical thinking technique
 17. Debate: teach critical thinking as a (a) separate course, (b) added on; or (c) embedded.
 18. Cost-Benefit Analyses--new course on CT/CR thinking skills for middle school/h.s. students.
 19. The name game... (Critical thinking and Cooperative/Collaborative Learning)
 - 20. Break #2**
 21. Bonk to Lecture on Creativity
 22. Creativity test (pp. 180-181) Gough Personality Test (pp. 261-262)
 23. Creative Whack Pack and other card packs (try activity #12, #1, and #2)
 - a. What can you do to teach or enhance creativity in your school/work setting?
 - b. Find a match.
 - c. Call to action.
 - d. How can you use these cards?
 24. Pick a model of Creative Problem Solving and try to improve it. (pp. 245-249)

(e.g., Polya, Osburn, Parnes, Oech, Wallas, AUTA, Torrance, BS, Future PS).

 - a. Share Models Selected...Is there a true problem solving process that works for you???
 - b. Assessment dilemmas: validity and reliability.
 - c. Fishbowl: on the model you selected
 - 25. We need a Break #3...**
 26. Matching exercise
 27. Review of List of 25 creative thinking techniques (pp. 168-169).
 - 28. More Tall Tale Story Telling...**
 29. Rearrange facts/what if (**Pick one** and write for a minute):
 1. What-if no one studied creativity and we had no understanding of creative processes?
 2. What-if no one assessed creativity? There were no cr measures or researchers?
 3. Just suppose you were in charge of curriculum? How would you address cr?
 4. What if we had standardized creativity or coop. learning tests in Indiana?
 5. What-if creative thinking was more prevalent in dogs than human beings?
 6. What is Education 3.0 was required by state governments? What would teaching be like?
 7. What if flipping the classroom was possible 30 years ago? What education be like now?
 8. What-if more creative people lived 20 years longer than non less creative?
 9. What if critical thinking was banned in K-12 schools?
 10. What would teaching creative thinking be like if we lived life in reverse...???
 11. Just suppose Indiana assessed the level of instructor or department thoughtfulness?
 30. Just suppose

October 2, 2021, Week 6: Creative Thinking Defined and Explained
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Week 6 Saturday Class Agenda:

3. **Warmup Activities:** Creativity tests: (1) Davis (pp. 180-181); (2) Gough Personality Test (pp. 261-262); and (3) the Creative Behavior Inventory (Hocevar, 1979, 1980) (pp. 263-265)
4. Admin: Who would like to present something for 5 or 10 minutes in Week 8?
5. Review of List of 25 creative thinking techniques (pp. 168-169).
6. Tall Tale Story Telling...
7. Pick a model of Creative Problem Solving and try to improve it. (pp. 245-249)
(e.g., Polya, Osburn, Parnes, Oech, Wallas, AUTA, Torrance, BS, Future PS).
 - a. Share Models Selected...Is there a true problem solving process that works for you???
 - b. Assessment dilemmas: validity and reliability.
 - c. Fishbowl: on the model you selected
8. Creative Whack Pack and other card packs (try activity #12, #1, and #2)
 - a. What can you do to teach or enhance creativity in your school/work setting?
 - b. Find a match.
 - c. Call to action.
 - d. How can you use these cards?
9. **We need a Break #1...**
10. Rearrange facts/what if (**Pick one** and write for a minute on a notecard):
 1. What-if no one studied creativity and we had no understanding of creative processes?
 2. What-if no one assessed creativity? There were no creativity measures or researchers?
 3. Just suppose you were in charge of the curriculum? How would you address creativity?
 4. What if we had standardized creativity or critical thinking tests in your city?
 5. What-if critical or creative thinking was more prevalent in dogs and cats than human beings?
 6. What if Education 3.0 ideas were endorsed by governments? What would teaching be like?
 7. What if creativity were common in schools 30 years ago? What education be like now?
 8. What-if more creative people lived 20 years longer than those that are less creative?
 9. What if critical and creative thinking was banned in K-12 schools?
 10. What would teaching for creative thinking be like if we lived life in reverse...???
 11. Just suppose your schools assessed the level of instructor or department creativity?
11. Bonk to Lecture on Creativity
12. Finding New Patterns, Juxtaposing Ideas, Seeing Functional Fixity, etc...
13. Dead Poets Society
 - a. Barbaric Yawp: <https://www.youtube.com/watch?v=gQU3EphIpMY>
 - b. Understanding Poetry: <https://www.youtube.com/watch?v=LjHORRHxtyI>
 - c. What will your verse be?: https://www.youtube.com/watch?v=R_zsMwCOoEs
 - d. Oh Captain, my Captain: <https://www.youtube.com/watch?v=j64SctPKmqk>
 - e. Carpe Diem: https://www.youtube.com/watch?v=0wjprQ_lsl
 - f. Carpe Diem: <https://www.youtube.com/watch?v=veYR3ZC9wMQ&index=3&list=RDj64SctPKmqk>
14. Make Shift Fishbowl: What if taught like this, would you be fired. (Front Row, Back Row)
 - a. Six Hats and other hats

15. The Creativity Case: Class Discussion with 27 Thinking Roles (p. 194)
 16. **We need Break #2...**
 17. Bonk to Lecture on Creativity (e.g., Synectics: Direct, Personal, and Fantasy Analogies)
 18. Flexibility/Breaking Set Activity
 - a. New Perspectives, Metaphoric Thkg, Analogies, Synectics, Breaking Set, Imagery, Aesthetics,
 19. Finding New Patterns, Juxtaposing Ideas, Seeing Functional Fixity, etc...
 20. See: Word games; Which one is different; Nine dots (p. 229); Flying Pig; Davis; Synectics: Direct, Personal, and Fantasy Analogies; Concealed colors, sentences/words; 13 original colonies
 21. Go through course packet of handouts.
 22. Creativity (rate yourself, fill out handout)--Are you creative?
 - a. Experimental-safekeeping self-rating: Find your spot pp. 183-184
 - b. von Oech's Explorer, Artist, Judge, Warrior pp. 187-188
 - c. Right vs. Left Brained, pp. 238 & 240
 23. **Break #3**
 24. More Creative Dramatics (Davis' 5th edition, pp. 297-306):
 - a. Imagine taste/smell...People Machines, Imagine hear, touch, smell, tastes.
 - b. Invisible ball tossing.
 - c. Just Imagine: served in Vietnam.
 - d. Favorite animal poses, ridiculous poses, stiffest/most rubbery, angriest/happiest.
 - e. Mirrors, puppets, ice cubes.
 25. Creativity Techniques
 - a. Tell a tall tale...give an example of an idea squelching statement. What do you see? How is creativity squelched here. Please use 3-4 idea squelching statements in your story.
 1. Which idea squelcher are the most common for you? Create a new one.
 2. Stand and sit...give an example of an idea squelching statement.
 - b. Object Obituary--write an obituary for an object you recently trashed...
 - c. Metaphorical Thinking: On the meaning of creativity: 1. Creativity is like _____. Being Creative is like _____. Creativity is to ___ as...
 - d. Morphological Synthesis
 26. More Creative Reflection Exercises:
 - a. *Wet ink* on most constructivist/hands-on high school teacher. She/he was like a _____.
 - b. *Wet Ink II*. Just imagine: imagine you have created a psychologically safe envir...What do you see? Can students wonder, question, speculate, take risks, active listening, respect for ideas, withhold judgment, seek justification??? How is creativity fostered here? Describe environment. Physically, mentally, emotionally, etc...
 27. Brainstorming--more is better, wilder the better, hitchhiking encouraged, no eval, combine
 - a. *Brainstorm*: ways to increase use of creative thinking in schools?
 - b. *Reverse BS*: ways to decrease use of creative thinking in schools?
 28. Synapse School: <https://www.synapseschool.org/>
 29. **John Cleese on Creativity**: Below is the comedian who is a creativity specialist as well as an actor and an instructional designer. John Cleese: [Wikipedia](#). Homepage: <http://www.thejohncleese.com/>; movies: <http://www.imdb.com/name/nm0000092/>
- John Cleese on Creativity in Management: <https://www.youtube.com/watch?v=Pb5oIIP062g> (36:59)
- John Cleese on Creativity: <https://www.youtube.com/watch?v=DMpdPrm6UI4> (10:36)
- Silly Job Interview: <https://www.youtube.com/watch?v=zP0sqRMzkwo&t=35s> (4:06) 6 million views.

October 9, 2021, Week 7: Creativity Part 2 and Motivation Part 1
R546: Instructional Strategies for Thinking, Collaboration, and Motivation
Instructor: Curt Bonk, Indiana University

Week 7 Saturday Class Agenda:

1. Ice Breaker Warm up: Scrambled Cities (p. 121) and I.Q. Test (p. 122)
2. Setting up Week 8 presentations and book returns.
3. Polling Wall: 1. Are you creative? 2. Can we accurately test for creativity? 3. Can we teach students to be significantly more creative? 4. Which is the most important unit module in this course?
4. Rearrange facts/what if (**Pick one** and write for a minute on a notecard):
 1. What-if no one studied creativity and we had no understanding of creative processes?
 2. What-if no one assessed creativity? There were no creativity measures or researchers?
 3. Just suppose you were in charge of the curriculum? How would you address creativity?
 4. What if we had standardized creativity or critical thinking tests in your city?
 5. What-if critical or creative thinking was more prevalent in dogs and cats than human beings?
 6. What if Education 3.0 ideas were endorsed by governments? What would teaching be like?
 7. What if creativity were common in schools 30 years ago? What education be like now?
 8. What-if more creative people lived 20 years longer than those that are less creative?
 9. What if critical and creative thinking was banned in K-12 schools?
 10. What would teaching for creative thinking be like if we lived life in reverse...???
 11. Just suppose your schools assessed the level of instructor or department creativity?
5. Bonk to Lecture on Creativity
6. Finding New Patterns, Juxtaposing Ideas, Seeing Functional Fixity, etc...
7. Dead Poets Society
 - a. Barbaric Yawp: <https://www.youtube.com/watch?v=gQU3EphIpMY>
 - b. Understanding Poetry: <https://www.youtube.com/watch?v=LjHORRHxtyI>
 - c. What will your verse be?: https://www.youtube.com/watch?v=R_zsMwCOoEs
 - d. Oh Captain, my Captain: <https://www.youtube.com/watch?v=j64SctPKmqk>
 - e. Carpe Diem: https://www.youtube.com/watch?v=0wjprQ_lsl
 - f. Carpe Diem: <https://www.youtube.com/watch?v=veYR3ZC9wMQ&index=3&list=RDj64SctPKmqk>
8. Make Shift Fishbowl: What if taught like this, would you be fired. (Front Row, Back Row)
 - a. Six Hats and other hats
9. **Break #1**
10. Creativity testing (pp. 180-181). Handout packet pp. 17-18.
11. Creativity (rate yourself, fill out handout from yesterday)--Are you creative?
 - a. Experimental-safekeeping self-rating: Find your spot pp. 183-184
 - b. von Oech's Explorer, Artist, Judge, Warrior pp. 187-188
 - c. Right vs. Left Brained, pp. 238 & 240
12. Creativity Assessment
 - a. Torrance: Cardboard Boxes (Activity #5: Unusual Uses)
 - b. Remote Associations Test
 - c. Williams: Parent/Teacher Rating (try for a son, daughter, cousin)
 - d. Schaefer: Creativity Attitude Survey

13. Go through course packet of handouts.
14. Flexibility/Breaking Set Activity
 - a. New Perspectives, Metaphoric Thkg, Analogies, Synectics, Breaking Set, Imagery, Aesthetics, Finding New Patterns, Juxtaposing Ideas, Seeing Functional Fixity, etc...
15. See: Word games; Which one is different; Nine dots (p. 229); Flying Pig; Davis; Synectics: Direct, Personal, and Fantasy Analogies; Concealed colors, sentences/words; 13 original colonies
16. Future Problem solving videos in YouTube.
- 18. Break #2**
19. More Creative Dramatics (Davis' 5th edition, pp. 297-306):
 - f. Imagine taste/smell...People Machines, imagine hear, touch, smell, tastes.
 - g. Invisible ball tossing.
 - h. Just Imagine: served in Vietnam.
 - i. Favorite animal poses, ridiculous poses, stiffest/most rubbery, angriest/happiest.
 - j. Mirrors, puppets, ice cubes.
20. Brainstorming--more is better, wilder the better, hitchhiking encour, no eval, combine
 - c. *Brainstorm*: ways to increase use of creative thinking in schools?
 - d. Reverse BS: ways to decrease use of creative thinking in schools?
21. Idea Squelching statements (pages 185 and 193)
22. *Wet ink* on most constructivist/hands-on high school teacher. She/he was like a _____.
23. *Wet Ink II*. Just imagine: imagine you have created a psychologically safe envir...What do you see? Can students wonder, question, speculate, take risks, active listening, respect for ideas, withhold judgment, seek justification??? How is creativity fostered here? Describe environment. Physically, mentally, emotionally, etc...
24. Metaphorical Thinking: On the meaning of creativity: 1. Creativity is like _____. Being Creative is like _____. Creativity is to ____ as...
- 25. Break #3**
26. Attribute Listing, Modification, and Transformation (Davis pp. 178-186); SCAMPER
 - a. Attribute Webbing/Listing: "XYZ" shapes, colors, sizes, purpose, numbering.
 - b. Attribute Modification: "XYZ"--after listing attributes, think of ways to improve each.
 - c. Alternative Uses: Uses for "XYZ" for this class or for teaching in general. (find the second best or third best suggestion)
 - d. Attribute Transferring: "XYZ"--transfer ideas from one context to the next. (with idea spurring questions--p. 80; Davis 195. (What else is this like? What have others done? What else is this like? What could we copy? What has worked before?) (What can we borrow from a carnival, funeral parlor, track meet, wild west)
 - e. Idea Spurring Questions: how MAXimize, MAGnify, arrangeRE, combine-adapt, subtutesti, EEEXXAAGGGGEEERRRAATTTEEE, *add new twist*, modifie, ChAnGe
27. Object Obituary (or Activity or Teaching Approach Obituary)--write an obituary for an object you recently trashed...or a teaching method or activity you will no longer use.
28. Morphological Synthesis.
29. Review #1: The name game... (Critical, Creative, Cooperative—Count off 1, 2, 3)
30. Review #2: Ball Toss (What-if?)
31. Bonk Bingo R546 Review Quiz...

October 16, 2021, Week 8: Motivation and Presentations
R546: Instructional Strategies for Thinking, Collaboration, and Motivation
Instructor: Curt Bonk, Indiana University

Week 8 Saturday Class Agenda:

1. 8:00-8:10 Turn in Final assignments
2. 8:10-8:40 Presenters...
3. 8:40-9:10 Bonk Bingo R546 Review Quiz...
4. 9:10-9:30 **Break #1**
5. 9:30-10:30 Motivation Lecture: Part 1 Theory
6. 10:30-10:45 **Break #2**
7. 10:45-11:45 Motivation Lecture: Part 2 Practice: Various Motivational Activities
8. Coat of Arms (see Book of Handouts, p. 118-119).
 - #1: a recent Peak Performance;
 - #2: something very few people know;
 - #3: draw a symbol of how you spend your free time;
 - #4: fill in something you are really good at;
 - #5: write in something that epitomizes your personal motto.
9. Self-disclosure introductions... (p. 120) (2 objects brought with you)
 - a. Take out two items (e.g., family pictures, credit cards, rabbits' feet, book you're reading)
 - b. Describe themselves (e.g., "I am superstitious")
 - c. State name with an adjective starting with 1st letter of 1st name.
(e.g., Quick Curt, Marvelous Mary, Dancing Diane)
 - d. Now intro self & also by a nickname current, past, or potential nickname.
(ask others what it means during break)
 - e. Brainstorm a list of questions you would like to ask the others...
(e.g., My person I most admire is? The best book I ever read?)
10. Treasure Hunt (p. 123).
11. Accomplishment Hunt: Turn in 2-3 accomplishments (e.g., past summer, college, life)
12. Motivation (Best of the Best Competition)
 - a. 33 highlights of research on strategies for motivating to learn (Jere Brophy)
 - b. 150 ways to increase intrinsic motivation (James Raffini)
 - c. 1001 ways to energize employees (Bob Nelson)
 - d. 200 ways to motivate secondary students (pp. 91-105)
13. 11:45-12:00 **Break #3**
14. 12:00-12:15 What goes into your creative space?
15. 12:15-12:30 Object reflections on class so far...(pass out objects)
16. 12:30-12:50 Quick Summaries of Other student Projects
17. 12:50-12:55 Psychic Massage of instructors....and students?
18. 12:55-1:00 Sad Goodbye

**R546: Instructional Strategies for
Thinking, Collaboration, and Motivation
Extra Handouts
Curt Bonk, Indiana University
Fall 2021**

Technology Integration Presentation

Two Models of Technology Integration:

Framework/Model #1: R2D2

Curt Bonk, Indiana University

	Ideas Definitely Can Use	Ideas Might Use	Ideas Can't Use	Questions and Comments
1. Read				
2. Reflect				
3. Display				
4. Do				
Across Phases				

Technology Integration Presentation

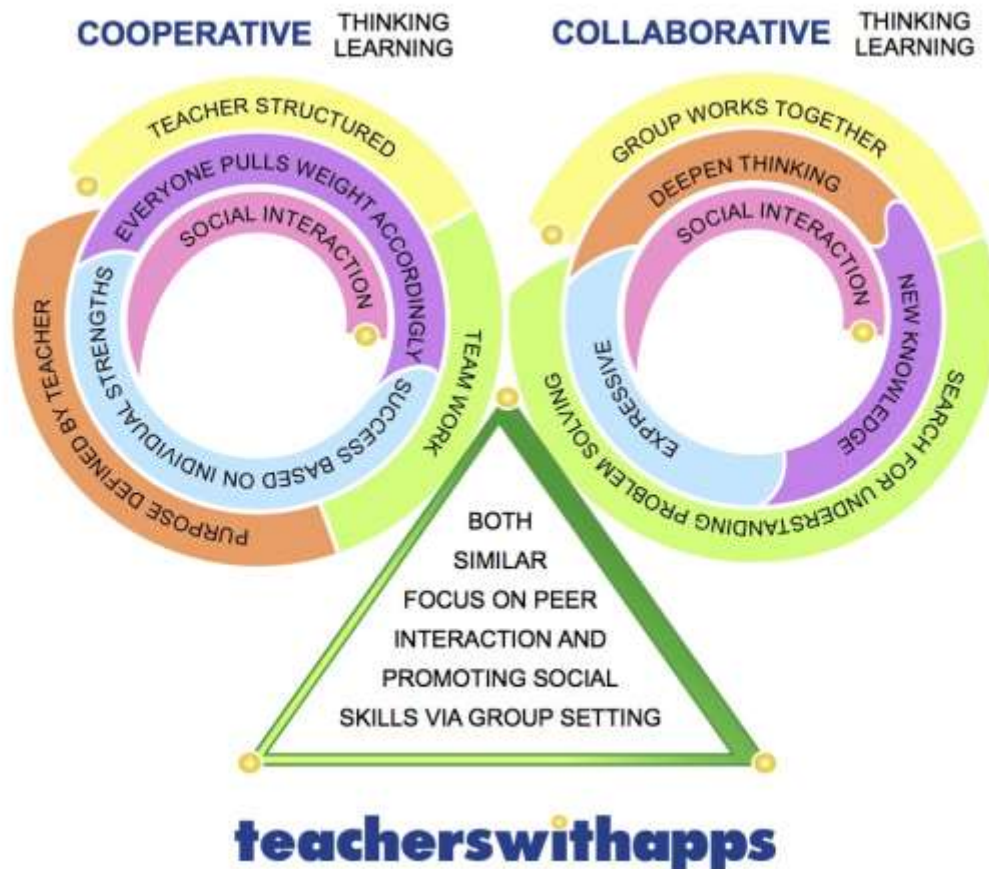
Two Models of Technology Integration: Framework/Model #2: TEC-VARIETY

Curt Bonk, Indiana University

	Ideas Definitely Can Use	Ideas Might Use	Ideas Can't Use	Questions and Comments
1. Tone and Climate				
2. Encouragement and Feedback				
3. Curiosity and Intrigue				
4. Variety and Novelty				
5. Autonomy and Choice				
6. Relevance, Meaningful, Authentic, and Interesting				
7. Interactive and Collaborative				
8. Engagement and Involvement				
9. Tension and Challenge				
10. Yielding Products, Goals, and Purpose				

The Difference in Cooperative Learning & Collaborative Learning
BY JAYNE CLARE · MARCH 3, 2015 · [BLOG, TEACHER TOOLS](http://www.teacherswithapps.com)

<http://www.teacherswithapps.com/the-differences-in-cooperative-learning-collaborative-learning/>



Cooperative Learning is an instructional strategy that simultaneously addresses academic and social skill learning by students. It is an instructional strategy and has been reported to be highly successful in the classroom because of its increasing need for interdependence in all levels, providing students with the tools to effectively learn from each other. Students work towards fulfilling academic and social skill goals that are clearly stated. It is a team approach where the success of the group depends upon everyone pulling his or her weight.

Collaborative learning is commonly illustrated when groups of students work together to search for understanding, meaning, or solutions or to create an artifact or product of their learning. Further, collaborative learning redefines traditional student-teacher relationship in the classroom because activities can include collaborative writing, group projects, joint problem solving, debates, study teams, and other activities in which students team together to explore a significant question or create a meaning project.

Sample Creativity Test (R546)

I. Rate yourself on 1-10 scale (do #21 if you skipped one):

SCALE:

1 2 3 4 5	6 7 8 9 10
<input type="checkbox"/> 1. censors	feels
<input type="checkbox"/> 2. evaluates	takes risks
<input type="checkbox"/> 3. reassures & supports	takes risks
<input type="checkbox"/> 4. analyzes	makes connections
<input type="checkbox"/> 5. is realistic	plays
<input type="checkbox"/> 6. looks at consequences	speculates
<input type="checkbox"/> 7. is logical	is curious
<input type="checkbox"/> 8. alert to danger	sees the fun in things
<input type="checkbox"/> 9. avoids surprises	likes surprises
<input type="checkbox"/> 10. avoids wrongness	open to anything
<input type="checkbox"/> 11. punishes wrongness	in touch with total experience
<input type="checkbox"/> 12. is serious	does not mind being confused
<input type="checkbox"/> 13. is pessimistic	is optimistic
<input type="checkbox"/> 14. is judgmental	focus on what is going for the idea
<input type="checkbox"/> 15. argue	waste no energy evaluating early
<input type="checkbox"/> 16. inattention/distant	listen and interested
<input type="checkbox"/> 17. be noncommittal	wholly open to being available
<input type="checkbox"/> 18. correct and precise	set up win/wins--nobody loses
<input type="checkbox"/> 19. dominant/commands	deal with as an equal--eliminate rank
<input type="checkbox"/> 20. point out flaws	see the value in/assume valuable implications
<input type="checkbox"/> 21. fearful	is impetuous

(over)

II. Now rate yourself on the following items on a 1-10 scale (10 being high and 1 being low).

SCALE: Low Medium High

1 2 3 4 5 6 7 8 9 10

- ___ 1. self-confident
- ___ 2. risk-taking
- ___ 3. high in energy
- ___ 4. stubborn
- ___ 5. curious
- ___ 6. playful, childlike
- ___ 7. resists domination
- ___ 8. enthusiastic
- ___ 9. wide interests
- ___ 10. non-participation in class activities
- ___ 11. good sense of humor
- ___ 12. idealistic
- ___ 13. reflective
- ___ 14. uncooperative
- ___ 15. need privacy, alone time
- ___ 16. artistic interests
- ___ 17. capriciousness
- ___ 18. low interest in details
- ___ 19. too emotional
- ___ 20. adventurous
- ___ 21. aesthetic interests
- ___ 22. attracted to novelty, complexity, and the mysterious
- ___ 23. sometimes uncommunicative
- ___ 24. forgetful, absentmindedness, mind wanders
- ___ 25. egocentric
- ___ 26. too demanding
- ___ 27. autonomous
- ___ 28. open-minded
- ___ 29. ambitious
- ___ 30. temperamental
- ___ 31. sloppiness and disorganization with unimportant matters
- ___ 32. dresses differently
- ___ 33. does things different from standard procedures
- ___ 34. imaginative
- ___ 35. is full of ideas
- ___ 36. is a "what if?" person
- ___ 37. high verbal, conversational ability
- ___ 38. not afraid to try something new
- ___ 39. uses all senses in observing
- ___ 40. ability to regress and transform items

The Creative Insights of Heraclitus (as interpreted by Roger von Oech)

1. The cosmos speaks in patterns.
2. Expect the Unexpected, or you won't find it.
3. Everything flows.
4. You can't step in the same river twice.
5. That which opposes produces benefit.
6. A wonderful harmony is created when we join together the seemingly unconnected.
7. If all things turned to smoke, the nose would become the discerning organ.
8. The Sun will not exceed its limits, because the avenging Furies, ministers of Justice, would find out.
9. Lovers of wisdom must open their minds to very many things.
10. I searched into myself.
11. Knowing many things doesn't teach insight.
12. Many fail to grasp what's right in the palm of their hand.
13. When there is no sun, we can see the evening stars.
14. The most beautiful order is a heap of sweepings piled up at random.
15. Things love to conceal their true nature.
16. Those who approach life like a child playing a game, moving and pushing pieces, possess the power of kings.
17. Sea water is both pure and polluted: for fish it is drinkable and life-giving; for humans undrinkable and destructive.
18. On a circle, an end point can also be a beginning point.
19. It is disease that makes health pleasant, hunger that makes fullness good, and weariness that makes rest sweet.
20. The doctor inflicts pain to cure suffering.
21. The way up and the way down are one and the same.
22. A thing rests by changing.
23. The barley-wine drink falls apart unless it is stirred.
24. While we're awake, we share one universe, but in sleep we each turn away to a world of our own.
25. Dogs bark at what they don't understand.
26. Donkeys prefer garbage to gold.
27. Every walking animal is driven to its purpose with a whack.
28. There is a greater need to extinguish arrogance than a blazing fire.
29. Your character is your destiny.
30. The sun is new each day.

Critical Thinking Methods Activity

Curt Bonk, R546

Idea Listing Activities (many are Edward de Bono's Methods)

1. K-W-L (What did U know?, What do U want to know?, What did U learn?)
2. PMI: Plus, Minus, Interesting
3. APC: Alt's, Possibilities, & Choices (The tasks) (This is CR BS!)
4. FIP: First Important Priorities (e.g., what tasks to do for this class)
5. AGO: Aims, Goals, Objectives
6. OPV: Other People's Views
7. C&S: Consequence & Sequel (of an action or decision)
8. CAF: Considering All Factors
9. FI - FO: Info In (Already accounted for) - Info Out (Unknown/still needed)
10. EBS: Examining Both Sides of an Argument
11. ADI: Agree, Disagree, Irrelevant

Issues and Decisions:

1. Should we add more videoconferencing locations in Indiana for this class? e.g., near Chicago? Fort Wayne? South Bend? Near Louisville? IU East? Etc.
2. Should we add more international videoconferencing locations for this class (e.g., Beijing and Shanghai given all the Chinese scholars in this class; What about Helsinki? Mumbai? Taipei? Singapore? Auckland? Tel Aviv? Hanoi? Etc.)?
3. Should IU Bloomington build another parking lot near the School of Education?
4. Can the world stop the Zika virus?
5. Should countries of the world partner together and set their sights on Mars with space exploration?
6. How quickly does the world need to move from coal and gas power to solar power, wind power, or something else to avoid global warming?
7. Should the United States take more refugees from Syria?
8. Should Facebook add even more buttons? For example, a "Strongly Dislike" button?
9. Should healthcare providers offer incentives to workers to get their blood pressure to 120 or below?
10. Should the School of Ed library in Bloomington be shrunk to make room for offices?
11. Should the School of Education add a third wing to showcase research and add additional floor space?
12. Should Twitter allow twice as many characters?
13. How can the Virgin Islands, Houston, North and South Carolina, and Florida better prepare for hurricanes?
14. Should the state of Indiana provide more funding using tolls and taxes for finishing the new highway 69?
15. Should new federally funded jobs like disaster relief specialist be created to deal with hurricanes, severe, storms, oil spills, explosions, etc.?
16. Should the IST program offer a special master's degree to people in Singapore only?
17. Should IU have bigger signage and more signs at the entrance to campus?

Bloom's Taxonomy

Meanings of Bloom's Level of Questions

Levels	Definition	Verbs
Knowledge	Questions about <u>facts</u>	list, recall, memorize
Comprehension	Questions of <u>understanding</u> of facts	explain, reword
Application	Questions of <u>using</u> the facts	solve by, organize to prove
Analysis	Questions <u>taking apart</u> information	break down, compare, put into categories
Synthesis	Questions <u>putting together</u> information in a new way	create, compose, reorganize
Evaluation	Questions of judgment or <u>value</u> of information	rate, choose, justify

Knowledge Level I	Comprehension Level II	Application Level III	Analysis Level IV	Synthesis Level V	Evaluation Level VI
define	describe	apply	analyze	compose	appraise
find	discuss	calculate	compare-	construct	assess
identify	explain	demonstrate	components	design	choose
know	express	diagram	debate	develop	compare and
list	identify	dramatize	deduce	formulate	contrast
locate	interpret	employ	detect	hypothesis	decide
match	locate	extrapolate	differentiate	manage	estimate
memorize	recognize	graph	discover	organize	evaluate
name	report	illustrate	distinguish	originate	grade
recall	restate	operate	examine	plan	judge
recite	review	practice	experiment	produce	rank
relate	reword	schedule	infer	propose	rate
repeat	summarize	sketch	inventory		select
say	tell	solve	question		value
	translate	transfer	reduce		
		try	test		
		use			

Knowledge (get the basic facts)

list, match, write, recall, know, summarize, who, what, where, when, say in your own words, observe and write, memorize, arrange, put into categories, select, name, tell about, group, show, underline, find, choose, label, spell, pick, point to, say

Comprehension (understand the facts)

explain, show, demonstrate, change, reword, interpret, alter, transform, retell, account for, recognize, offer, propose, submit, define, translate, convert, expand, outline, vary, spell out, restate in your own words

Application (use the facts)

apply, select, solve by, organize, choose, interview, make use of, experiment with, try, operate, relate, put to use, handle, put into action, utilize, record, model, construct, demonstrate through, put together

Analysis (select, examine, and break apart by facts)

breakdown, inspect, divide, take away, dissect, put into categories, examine, uncover, survey, group, analyze, test for, study, classify, identify the parts for, search, clarify, discover, contrast, compare, simplify, take apart

Synthesis (put the basic information back together in a new way)

create, design, develop, discuss, build, imagine, compare, re-order, make, compose, combine, form, compile, blend, construct, predict, invent, reorganize, contrast, make up, estimate, suppose, rearrange, alternate, originate

Evaluation (value, judge, accept or reject facts)

rank, evaluate, rate, judge, measure, choose, criticize, justify, determine, conclude, grade, select, award, recommend, reveal, dispute, rule on, decide, defend

Bloom's Taxonomy

Knowledge	<p>Knowledge of specifics (What is the principal ingredient in the air we breathe?)</p> <p>Knowledge of ways and means of dealing with specifics (What steps would you have to take to become a licensed operator? What is the correct form for presenting a motion before a meeting?)</p> <p>Knowledge of universals and abstractions (What is the basic principle behind the operation of a free market?)</p>
Comprehension	<p>Translation (In your own words what does "laissez-faire economy" mean? What does it mean to say that to the victor belongs the spoils?)</p> <p>Interpretation (In what ways are the Democratic and Republican positions on support for the military budget similar?)</p> <p>Extrapolation (If the use of electrical energy continues to increase at the present rate, what will be the demand for electrical energy in A.D. 2000?)</p>
Application	<p>(If you measure the pressure in your barometer at the foot of the mountain and then measure it again at the summit of the mountain, what difference in the reading would you expect? If of two sailing vessels leaving New York at the same time en route to London one took a route following the Gulf Stream and one kept consistently south of the Gulf Stream, which would you expect to reach London first, everything else being equal?)</p>
Analysis	<p>(Questions that ask pupils to break complex ideas down into their component elements in order to make them more understandable.)</p>

	<p>Analysis of elements (Which part of the argument we have just read is fact and which is opinion? What propaganda devices can you find in this automobile advertisement?)</p> <p>Analysis of relationships (Does the conclusion that Senator X made logically follow from the facts he presented?)</p> <p>Analysis of organizational principles (In this poem what devices has the author used to build up the characters of the principal antagonists?)</p>
Synthesis	<p>Production of unique communication (Describe the procedure you used and the results you observed in the experiment.)</p> <p>Production of a plan or a proposed set of operations (How would you go about determining the composition of this unknown chemical?)</p> <p>Deviation of a set of abstract relations (You have heard the description of the situation. What might be the causes of this situation?)</p>
Evaluation	<p>Judgment in terms of internal evidence (In what ways is the argument presented illogically?)</p> <p>Judgment in terms of external criticism (Does the theory that organically grown foods are more healthful than other foods conform to what we know of the chemical composition of these foods? Explain)</p>

Images of Schools (Workplaces) Through Metaphor (ISM): Actual Form

Directions: Think about where you work or teach. What is it **actually like** working at this place? Indicate the extent to which you agree/disagree with each of the following 40 metaphors. Rate on a scale of 1 (Strongly Disagree) to 10 (Strongly Agree).

- ___ 1. My school (workplace) is a Mental Straight-jacket.
- ___ 2. My school (workplace) is a Military Camp.
- ___ 3. My school (workplace) is a Ghetto.
- ___ 4. My school (workplace) is a Prison.
- ___ 5. My school (workplace) is a Family.
- ___ 6. My school (workplace) is an Artist's Palette.
- ___ 7. My school (workplace) is a Team.
- ___ 8. My school (workplace) is a Negotiating Area.
- ___ 9. My school (workplace) is a Culture.
- ___ 10. My school (workplace) is an Exhibition.
- ___ 11. My school (workplace) is an Orchestra.
- ___ 12. My school (workplace) is a Garden.
- ___ 13. My school (workplace) is an Expedition.
- ___ 14. My school (workplace) is a Herd.
- ___ 15. My school (workplace) is a Museum.
- ___ 16. My school (workplace) is a Machine.
- ___ 17. My school (workplace) is a Hospital.
- ___ 18. My school (workplace) is a Nursery.
- ___ 19. My school (workplace) is a Labor Ward.
- ___ 20. My school (workplace) is a Beehive.
- ___ 21. My school (workplace) is a Living Organism.
- ___ 22. My school (workplace) is a Theater.
- ___ 23. My school (workplace) is an International Airport.
- ___ 24. My school (workplace) is a Refuge.
- ___ 25. My school (workplace) is an Ocean.
- ___ 26. My school (workplace) is a Board Game.
- ___ 27. My school (workplace) is a Camping Trip.
- ___ 28. My school (workplace) is a Court Room.
- ___ 29. My school (workplace) is a Monastery.
- ___ 30. My school (workplace) is a Pressure Cooker.
- ___ 31. My school (workplace) is a Fraternity Party.
- ___ 32. My school (workplace) is an Olympic Games.
- ___ 33. My school (workplace) is a Brew Pub.
- ___ 34. My school (workplace) is a Zoo.
- ___ 35. My school (workplace) is an Amusement Park.
- ___ 36. My school (workplace) is a Casino.
- ___ 37. My school (workplace) is a Tour Bus.
- ___ 38. My school (workplace) is a Theme Park.
- ___ 39. My school (workplace) is a Video Arcade.
- ___ 40. My school (workplace) is a Laboratory.

Images of Schools (Workplaces) Through Metaphor (ISM): Ideal Form

Directions: Think about where you work or teach. What would you **ideally want** this place to be like? Then indicate the extent to which you agree/disagree with each of the following 40 metaphors. Rate on a scale of 1 (Strongly Disagree) to 10 (Strongly Agree).

- ___ 1. My school (workplace) is a Mental Straight-jacket.
- ___ 2. My school (workplace) is a Military Camp.
- ___ 3. My school (workplace) is a Ghetto.
- ___ 4. My school (workplace) is a Prison.
- ___ 5. My school (workplace) is a Family.
- ___ 6. My school (workplace) is an Artist's Palette.
- ___ 7. My school (workplace) is a Team.
- ___ 8. My school (workplace) is a Negotiating Area.
- ___ 9. My school (workplace) is a Culture.
- ___ 10. My school (workplace) is an Exhibition.
- ___ 11. My school (workplace) is an Orchestra.
- ___ 12. My school (workplace) is a Garden.
- ___ 13. My school (workplace) is an Expedition.
- ___ 14. My school (workplace) is a Herd.
- ___ 15. My school (workplace) is a Museum.
- ___ 16. My school (workplace) is a Machine.
- ___ 17. My school (workplace) is a Hospital.
- ___ 18. My school (workplace) is a Nursery.
- ___ 19. My school (workplace) is a Labor Ward.
- ___ 20. My school (workplace) is a Beehive.
- ___ 21. My school (workplace) is a Living Organism.
- ___ 22. My school (workplace) is a Theater.
- ___ 23. My school (workplace) is an International Airport.
- ___ 24. My school (workplace) is a Refuge.
- ___ 25. My school (workplace) is an Ocean.
- ___ 26. My school (workplace) is a Board Game.
- ___ 27. My school (workplace) is a Camping Trip.
- ___ 28. My school (workplace) is a Court Room.
- ___ 29. My school (workplace) is a Monastery.
- ___ 30. My school (workplace) is a Pressure Cooker.
- ___ 31. My school (workplace) is a Fraternity Party.
- ___ 32. My school (workplace) is an Olympic Games.
- ___ 33. My school (workplace) is a Brew Pub.
- ___ 34. My school (workplace) is a Zoo.
- ___ 35. My school (workplace) is an Amusement Park.
- ___ 36. My school (workplace) is a Casino.
- ___ 37. My school (workplace) is a Tour Bus.
- ___ 38. My school (workplace) is a Theme Park.
- ___ 39. My school (workplace) is a Video Arcade.
- ___ 40. My school (workplace) is a Laboratory.

Active Learning Assessments (sample questions):

A. Reflection #1: A New Teacher Self-Assessment for active learning. (Bonk, 1995)

Rate: Never = 1; Seldom = 2; Sometimes = 3; Often = 4; Very Often = 5.

In my classes...

- 1. students have a say in class activities and tests.
- 2. I help students to explore, build, and connect their ideas.
- 3. students share their ideas and views with each other and me.
- 4. students can relate new terms and concepts to events in their lives
- 5. students work in small groups or teams when solving problems.
- 6. students use computers to help them organize and try out their ideas.
- 7. I give hints and clues for solving problems but do not give away the answers.
- 8. I relate new information or problems to what students have already learned.
- 9. students prepare answers with a partner or team b/4 sharing ideas with the class.
- 10. I ask questions that have more than one answer.
- 11. students take sides and debate issues and viewpoints.
- 12. students develop ideas from a variety of library and electronic resources.
- 13. students bring in information that extends across subject areas or links topics.
- 14. students suggest possible problems and tasks.
- 15. I provide diagrams or pictures of main ideas to make confusing info clearer.

B. Reflection #2: A Dept. Thoughtfulness Report Card: In this dept. (or class):

- 1. There is sustained examination of few topics, rather than superficial coverage of many.
- 2. The lessons display substantive coherence.
- 3. Students are given an appropriate amount of time to think.
- 4. Teachers carefully consider explanations and reasons for conclusions.
- 5. Teachers ask challenging questions and structure challenging tasks.
- 6. Teachers press students to justify or clarify assertions and answers.
- 7. Teachers try to get students to generate original ideas, explanations, and solutions.
- 8. Teachers are a model for thoughtfulness.
- 9. Students assume the roles of questioners and critics.
- 10. Students offer explanations and reasons for their conclusions.

C. Reflection #3: Student Thinking Report Card (Excerpts from *Teacher Assessment of Student Thinking* from John Barrell, 1991, Teaching for Thoughtfulness, Longman Publishing).

Rating Scale:

1 = completely false (F); 2 = mostly F; 3 = partly F/T; 4 = mostly True; 5 = completely True

- 1. The student is very interested in ideas.
- 2. The student works well in discussion groups.
- 3. The student can express ideas clearly.
- 4. The student cannot tell which ideas are more important.
- 5. The student can often combine many ideas into one idea.
- 6. The student runs out of ideas quickly.
- 7. The student can often suggest ideas not mentioned before.
- 8. The students thinking is not well organized.
- 9. The student is a lazy thinker.
- 10. The student asks good questions.
- 11. The student likes to try difficult problems.
- 12. The student cannot concentrate for too long.
- 13. The plans the student makes are well thought out.
- 14. The student has trouble making decisions.
- 15. The student can think well about a wide range of things.

Big Picture Revisited

a. What can teachers do to "assist" in student learning?

Ten Techniques To Assist In Learning: (Bonk & Kim, 1998; Tharp, 1993)

1. Modeling (illustrating and verbalizing invisible performance standards);
2. Directly Instructing (provide clarity, needed content, and missing information);
3. Coaching (observe and supervise in guiding toward expert performance);
4. Scaffolding and Fading (supporting what learner can't do and later removing support);
5. Cognitive Task Structuring (explaining/organizing the task within zones of development);
6. Questioning (requesting a verbal response using a mental function learner can't yet do);
7. Articulating and Dialoguing (encouraging description/summary of reasoning processes);
8. Reflecting (fostering self-reflection and analyses of previous performances);
9. Exploring (pushing student discovery and application of problem solving skills);
10. Managing & Feedback (giving performance feedback and positive reinforcement).

b. What resources exist for a learning environment? (Bonk, Hay, & Fischler, 1996).

Answer is eight different things:

- (1) Teachers, (2) Peers, (3) Curriculum/Textbooks, (4) Technology/Tools, (5) Experts/Community, (6) Assessment/Testing, (7) Self Reflection, (8) Parents.

c. Matrix of Active Learning Resources

Directions: Fill in the matrix grid by look at the intersection of resources and teaching techniques and place a plus ("+") to indicate whether it is possible, a negative ("-") to indicate it may not be possible, and a questionmark ("?") when you are uncertain if it is possible.

	1. Tchrs	2. Peers	3. Texts	4. Tech. Tools	5. Experts	6. Assess	7. Self	8. Parents
1. Model								
2. Directly Instruct								
3. Coach								
4. Scaffold & Fade								
5. Cogn. Task Structure								
6. Question								
7. Articulate & Dialogue								
8. Reflect								
9. Push to Explore								
10. Manage and Feedback								

Motivation Research Highlights (Brophy)

1. Supportive, appropriate challenge, meaningful, moderation/optimal.
2. Teach goal setting and self-reinforcement.
3. Offer rewards for good/improved performance.
4. Novelty, variety, choice, adaptable to interests.
5. Gamelike, fun, fantasy, curiosity, suspense, active.
6. Higher levels, divergence, dissonance, interact with peers.
7. Allow to create finished products.
8. Provide immediate feedback, advance organizers.
9. Show intensity, enthusiasm, interest, minimize anxiety.
10. Make content personal, concrete, familiar.

Other Classroom Motivation Tips

(Alexander, class notes, Pintrich & Schunk, 1996; Reeve, 1996; Stipek, 1998):

1. Include positive before negative comments.
2. Wish students “good effort” not “good luck”.
3. Give flexibility in assignments and due dates.
4. Communicate respect via tasks select and control.
5. Design interactive and interesting activities.
6. Use coop learning, debates, group discussions.
7. Minimize social comparisons and public evaluations.
8. Use relevant, authentic learning tasks.
9. Use optimal difficulty and novelty.
10. Use challenge, curiosity, control, and fantasy.
11. Give challenging but achievable tasks.
12. Create short term or proximal goals and vary these goals.
13. Give students different ways to demo what they know.
14. Encourage students to give and get help.
15. Attrib failure to low effort or ineffective strategy.
(Attrib success to effort or competence)
16. Give poor performing student the role of expert.

150 Ways to Motivate in the Classroom (Raffini, 1996)

1. Ice Breakers

(Treasured objects, birthday circles, treasure hunts, middle name game, accomplishment hunts, similarity wheels, who=s like me, coat of arms, self-disclosure intros, expectations charts, scrambled sayings)

2. Goal Cards, Goal Notebooks

(ST and LT with objectives and ideas how to achieve)

3. Floating A, Escape Clauses, Volunteer Assignments, etc.

(to be used on any assignment within 25 hours)

4. Self Report Cards, Self Evaluation

5. Discussion Questions, Issues, Problems, Solutions

(Perhaps answer questions of the other teams, talking chips)

6. Term Crossword Puzzles or Term Matching, Competitions, Dilemmas

7. Success Contracts and Choice Calenders

(Guarantee an A or B if fulfill contract provisions)

8. Positive Statements, Self Reinforcements

(Bury the “I can’ts” and Save the “I Cans”)

9. Celebrations, Praises, Acknowledgments, Thank Yous, Put-Ups

(Multicultural days, trips, class awards, helpers, end of term)

10. Class Community Building

(Web Site and Digitized Web class photo, photo album, class project, teeshirts, field trips)

11. Democratic Voting, Student Interest Surveys, Class Opinion Polls

12. Random Acts of Kindness, Service Learning/Teaching, Volunteerism

13. Change Roles or Status

(Random roles, assume expert roles, switch roles for a day)

1001 Ways to Energize Employees (Bob Nelson, 1996)

1. Bank of Boston--4 informational days to work on special projects.
2. Honda--places individuals who know nothing about tech in design teams.
3. Hewlett-Packard--takes out of routine by putting new bus plans on trial.
4. Delta Land Survey--employees vote once/year on dress code, bonuses, etc.
5. Tandem Computers--promotions based on technical OR managerial merit.
6. Scitor Corp--no max number of sick days (ave. is 5 days/year--low).
7. Adobe Systems--set own hours & eligible for stock options & sabbaticals.
8. Matsushita--created research lab of 20 scientists free to explore any proj.
9. Dan Corp.--employees can spend \$500/project to improve efficiencies.
10. Worthington Industries--majority of employees must approve new hires.
11. Xerox--share ideas no matter rank, time clocks out & teams are in (trust).
12. Hi-Tech Hose--lumps all vacation, sick, & holidays in a single account.
13. Pitney-Bowes--consider displaced persons b4 turning to outside market.
14. Ventura--pushes to take time off outdoors as long as work is done.
15. Lands= End--encourages to express interest in any dept interested in.
16. Microsoft--encourages fun/playfulness (e.g., installing sod, sprinklers, lawn mowers in an office).
17. Walmart--managers wear jeans once/week to help line workers/staff.
18. Duke Power Co.--can post electronic message to change/swap jobs.
19. Saturn--employees can send anonymous messages to upper management.
20. Whole Foods--everyone can access sales, profit margins, & salaries.
21. Diesel Tech Corp--disabled products so employees can see how fit.
22. FedEx--internal newsletter with columns devoted to competitor info.
23. Levi Strauss--employees rate each other on teamwork, trust, communication.
24. Computer Specialists--clients rate workers & employees rate own perf.
25. Queen Mary Resort--brainstorms & votes once/month how to imp jobs.
26. Advanced Micro Devices--managers have quarterly breakfast with boss.
27. Motorola--has quarterly employee town meetings with rap sessions.
28. S.C. Johnson Wax--flew all employees of foreign buy-outs to the U.S.
29. Com-Corp--installed "screwup boxes" to tell manage what doing wrong.
30. Wired Magazine--two "living room" mtg areas--sofas, stereos, CDs, etc.
31. Microsoft--play basketball, frisbee, golf, etc. and be casual at work.
32. Sun Micro--designed forum spaces & sun rooms for spontaneous conversations.
33. Lands End--\$9 mil for activ ctr--pool, track, photo, gym, tennis, picnic tables, whirlpool, etc.
34. Southwest Air--1/4 of profit sharing funds must go to company stock.
35. Computer Media Tech--encour volunteer in soup kitchens, elderly homes, etc.
36. Xerox--social service leave program (1 month to a year) with pay.
37. Ben Jerry=s Homemade--set aside 1% of profits for peace programs.
38. Salem Sportswear--anyone with a tie beyond a certain pt is fined \$2.
39. Owens-Corning Fiberglass--open space mtg rooms, no agenda, no plans.
40. Nissan--uses Involvement Through Teamwork (ITT) to discuss probs.
41. Siemans Info Sys--created team of 23 young, talented employees under 40 to advise management.
42. Hewlett-Packard--has 24 hour labs for res'ers & encourage to spend 10% on personal projects.
43. AT&T--project team weekly outings to play darts & shoot pool.
44. United Airlines--allowed workers to swap assignments (reduced sick time).
45. Odetics--wacky stuff; telephone booth stuffing contests, bubble gum blowing, >50s day, yoga.
46. Hallmark Greeting Cards--creativity ctr with clay, paint, etc. to think up ideas.
47. Chiat Day (ad agency)--hangs punching bags of execs in break rooms.
48. Alagaso--Pres Mike Warren distrib "Hey Mike" cards & posters in firm.
49. Cooper Tires--for ownership, operators can stamp names inside tires produced.
50. Southwest Air--CEO kissed an employee who turned down a job offer (both males).

Some Ice Breakers

(Bonk, 1998; Raffini, 1996; Scannell & Newstrom, 1991; Thiagarajan, 1998)

1. Ice Breakers

- a. Round I: Self-disclosure introductions (who are you, job, interests, hobbies)

2. Round II. Self-disclosure introductions...

- a. Treasured Objects--Take out two items out of your wallet and describe how they best represent you (e.g., family pictures, credit cards, rabbits' feet) and share.
- b. Describe themselves (e.g., "I am a tightwad," "I am superstitious")
- c. State name with an adjective starting with 1st letter of 1st name.
(e.g., Marvelous Mary, Dancing Diane, Inscrutable Ida, Crusty Curt)
- d. Now intro self & also by a nickname current, past, or potential nickname.
(ask others what it means during break)
- e. Brainstorm a list of questions you would like to ask the others...
(e.g., The person I most admire is? The best book I ever read?)
- f. Middle name game (state what middle name is and how you got it).

3. Expectations charts

What do you expect from this workshop, what are your goals, what could you contribute?

- a. Write short and long terms goals down on goal cards that can be referenced later on.
- b. Write 4-5 expectations for this workshop/retreat
- c. Expectations Flip Chart: share of 1-2 of these...

4. Treasure hunts--fill out card with interests, where born, would like to live, strengths, job role, hobbies, etc. and find a match (find one thing in common and one thing different with everyone)

Pass out an Index Card: What is unique about you???

- a. Favorite Sports/hobbies/past times (**upper left**)
- b. Birthplace and Favorite cities to visit (**upper right**)
- c. Current Job and Responsibilities (**lower left**)
- d. 2 comments, things, or traits about yourself (e.g., team player, personable, talkative, opinionated, hate Purdue, like movies, move a lot, hate sports) (**lower right**)
- e. Accomplishments you are proud of (**in the middle**)

5. Accomplishment Hunt

- a. Turn in 2-3 accomplishments (e.g., past summer, during college, during life);
- b. Workshop leader lists 1-2 of those for each student on a sheet without names.
- c. Participants have to ask "Is this you?" If yes, get a signature.

6. Issues and Discussion Questions

- a. make a list of issues people would like to discuss.
- b. Perhaps everyone brings 2-3 questions or issues to the meeting.
- c. Partner off and create a list and then collect question cards, and,
- d. then distribute and your group must answer questions of the other groups.

7. Team brainteasers (IQ tests), scrambled cities, crossword puzzles, competitions, dilemmas, or unscrambled sayings.

8. Coat of Arms--fill in.

- #1: a recent Peak Performance;
- #2: something very few people know;
- #3: draw a symbol of how you spend your free time;
- #4: fill in something you are really good at;
- #5: write in something that epitomizes your personal motto.

9. It'll Never Fly Wilbur

- a. Introduce a new idea or concept or plan.
 - b. Everyone writes 4-5 problems they see in it.
 - c. Divide into groups of 3-4 and discuss concerns.
 - d. Each group writes down 3 roadblocks on a 3 X 5 card.
 - e. Facilitator redistributes so each group gets a different card.
 - f. Subgroups think creatively of how to solve those problems and share with group.
10. Birthday groupings--Nonverbally up by date of year born and partner off with person closest to you in b-day and then do...
11. Talking String--state what hope to gain from retreat (or discuss some other issue) as wrap string around finger; next ones state names of previous people and then state their reasons.
12. Divide into small groups of about six people and then hand out prepared list of 5 questions in increasing order of disclosure for participants to ask each other and then have someone stand and their group must describe him or her.
13. Psychic Massage (a closer activity)
- a. Divide in teams of 3-5.
 - b. In alphabetical order of first names have someone turn his or back to the group
 - c. Team members must make positive, uplifting statements about that person behind his or her back but loud enough for others to hear them.
 - d. One minute per person.
14. Positive Strokes
- a. 2-3 times during the session, each person fills out a 3 x 5 card about other participants.
 - b. They must complete sentences like: "the thing I like best about (name) is" and "the biggest improvement I saw in (name) is".
 - c. At the end of the day, the folded cards are passed out and read aloud and then given to the named person.
15. Community Building--common teeshirts, photo of group and perhaps put up on the Web. Put announcement of retreat on Web or newsletter.
16. Communication/Learning Visuals--Draw one or more of the following that you want to use during the training: Gun, cannon, noose, high fives, thumbs up, watch, toilet, smiley face, etc.
17. Ask how feel, what has happened, what did they learn, how might this help in workplace, ask "what if" things were different at work, and what's next??--how might they do things differently?
18. Have you ever questions:
- Grown a garden? Presented at a conference? Worn a costume on Halloween? Met a famous politician? Been on the radio? Been on TV? Been in a parade? Performed the Heimlich maneuver? Walked on stilts? Surfed? Drank more than 10 cups of coffee in a 24 hour period? Owned a watch for more than 10 years? Tried on a straight jacket? Been to a morgue? Laid down inside a casket? Taken a Uber ride? Swum a mile in an ocean? Visited a winery? Owned a smart watch? Been a Boy Scout or Girl Scout? Shaved your head? Flown a drone? Flown a plane? Ditched a blind date? Water skied on one ski? Sky dived? Bungee jumped? Whitewater rafted a dangerous river? Been in a play? Milked a goat or a cow? Done back-to-back all-nighters? Completed a marathon? Broken a bone? Made an obscene gesture at someone when driving your car? Cheated on your income tax? Had a permanent tattoo? Run a toll booth? Had a hot cup of coffee spill on your lap? Been in the CN Tower in Toronto? Visited Canada? Mexico? Been above the Arctic circle or below the Antarctic Circle? Driven a race car? Slept in the forest?