Bibliography for Ten Strategies for Active Learning

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Feedback and Guided Lectures

Are you a “sage on the stage or a guide on the side?” **(IP, 81)**

“Guided lecture:” students listen for 20-30 minutes to a lecture without taking notes. Then they spend five minutes writing down what they remember of the lecture. The remainder of the hour they work in small groups clarifying and expanding their notes. This technique enables faculty to effectively address and counter low retention rates among students for information presented in a lecture (as documented in research studies) (**CT, 67).**

“Modified lecture:” The lecturer pauses three times during the lecture. During the pauses students work in pairs to discuss and rework their notes (**CT, 68)**.

“Simultaneous explanation pairs:” when the teacher asks a question, all students turn to a classmate and take turns formulating explanations and sharing their reasoning. The teacher can offer feedback by selecting one pair to report to the class on their findings (**IP, 96).**

“***Think, Pair, Share:” Pause in the lecture to ask a question, to which students write down individual answers. Ask students to share their answers in small groups. Select one group to share their answer with others. (This approach offers safety to students who don’t want to speak up in a large class) **(UAL, 35).**

***“Guided teaching:” prior to presenting lecture material, pose a series of questions to students that tap their thinking and existing knowledge (a question may have several possible answers). Have students work with partners or in small groups on the questions. List students’ ideas (offered by recorders from the groups), making an effort to sort responses into lists that correspond to the categories and concepts planned for the lecture. Present the major learning points for the lecture, asking students to link ideas with the lists on the board. Note ideas they have offered that add to the learning points of the lecture (**101S, 77).**

“Listening teams:” divide students into four teams prior to offering the lecture. 1) Questioners: will ask at least four questions about the lecture; 2) Agreers: will tell with which points they agree, find informative, find helpful and explain why; 3) Nay-sayers: will comment on points with which they disagree, find confusing, find not helpful, and explain why; 4) Example givers: will give illustrations and applications of the materials. After the lecture, convene groups for work. Then call on each team for reports. Other team members: summarizers, test-question creators (to ask peers questions about the lecture); comparers (to compare lecture topic with topic previously discussed). **(101S, 72).**

“Planted questions:” Choose a series of questions that are guides to moments in your lecture. Write each on a card that states: Do not show this card to anyone. During the lecture when I (choose one: scratch my nose, take off my glasses, snap my fingers, yawn) raise your hand and ask me the following question: fill in question. Distribute cards to students before class. After planted questions have been responded to, invite questions. Odds are several hands will go up. (**(101S, 96).**

“Team quiz:” divide class into three teams and your lecture into three parts. After part one, ask team 1 to prepare questions on the lecture while teams 2 and 3 review their notes with each other. Ask team one to quiz team 2. For parts 2 and 3 of the lecture, repeat process, with team 2 offering the quiz to team 3 and team 3 offering it to team 1. (**101S, 107).**

Closure at the end of a lecture enhances student recall of lecture material. Strategies include: 1) pairs list five of the most important things they learned and two questions they would like to ask; 2) Students write a one-minute paper describing a major point they learned and the main unanswered question they still have; 3) students review their notes in pairs, making additions and corrections. Students circle three points which they agree are key. **(IP, 100).**

Small Group Work

Small groups can be used to "*generate* ideas in preparation for a lecture, film etc.; *summarize* main points in a text or reading; *assess* levels of skill and understanding; *reexamine* ideas presented in previous classes; *review* exams, problems, quizzes, and writing assignments; *process* learning outcomes at the end of class; *provide* comments to teachers on how a class is going; *compare and contrast* theories, issues, and interpretations; *solve* problems that relate theory to practice; and *brainstorm* applications of theory to life. Some professors begin class each day by grouping students into groups of 3-4 and giving each a 5-minute task (e.g., summarize the three main points of the assignment you read for homework). The benefit is that students enter an active mode of learning and become focused for the day's work. Classes also may end with small group work. **(PAL, 63)**

In addition to the above, partner discussions can be used to *interview* each other about reactions and views toward an assignment; *critique and edit* each other's work; *question* each other about an assigned reading; *recap* a lesson or class together; *develop questions* to ask classmates or the teacher; *respond* to a question posed by classmates or the teacher; *compare* lecture notes. (**101S, 18).**

Groups function best when students have a clear sense of their roles: 1) a *team captain* keeps the group on task and focused, she/he reads the assignment to the group, mediates conflict, and manages time; 2) the *recorder or clerk* takes minutes and writes down salient points. He/she also reports back to the class as a whole; 3) the *encourager* gives team members feedback and is responsible for ensuring that all group members are heard; 4) the *reflector* keeps track of dynamics of group process and makes comments (to be turned in with the clerk's) about focus, direction, organization, listening skills, participation of all members (**CT, 84).**

"Small group review:" A worksheet containing 3-5 questions is distributed for homework (e.g., examination questions, writing assignment questions, proposed questions for subsequent oral discussion). Students prepare written answers. During a small group discussion at the next class meeting, participants produce (via a recorder) a written report on the worksheet. Major ideas, common agreements and common disagreements in the group are recorded. Groups reassemble after preparing the reports and compare and contrast their findings. Points are assigned to the group project (to discourage free-loaders, the individual written reports may be assigned points also).**, AL, 44.**

***"Jig-saw:" divide learning material into segments. Assign each group one segment to discuss. Have groups work on the segment, with each member recording their information. Count off within each group. Regroup all 1s, 2s, 3s etc. Ask members of the jigsaw to share with others information from the segment their home group has discussed. Reconvene as a whole to review and respond to questions (**101S, 112).**

Note: a detailed handout for students that guides them in preparation for a jig saw session, offers specific assistance to them in teaching other group members; and enables them to process and evaluate their contributions to a jig saw session may be found in **UAL, 80-81.**

"Card sort:" assign segments of reading to students. Ask each student to write down a question from the reading on a 3x5 card (with page numbers of segment listed) that addresses a key idea, theme, or topic in the reading. Distribute cards in class. Each student writes an answer to the question. Ask for volunteers to read a question and their response. After a response is offered, ask for supplementary information form other students (**101S, 113).** Alternative card sort: hand each student two 3x5 cards. On one they will write "I still have a question about…" On the other "I can answer a question about …" Create subgroups to sort and review the question and answer cards. Have a "question" group read a question. Ask an "answer" group to respond. If no one is able, the teacher may respond. (**101S, 161).**

"Recap:" At the end of class, break students into small groups and assign questions such as, "What were the major topics we examined today? What are key points raised in today's discussion? What did you

find most compelling in today's class? What ideas are you taking away from class today? Invite groups to record summaries and share with others. (**101S, 166).**

"Break it down, Build it Up:" Students are divided into groups. Each group is assigned a section of a reading assignment. Students work together to outline main points of their assigned section. Each group is given one overhead transparency to use to capture the essence of the material in whatever way they choose (e.g., key words, diagrams, memory maps). After presentation of their section, students ask each other questions (**CL, 115).** An alternative: students are given on transparencies a blank matrix that diagrams (absent specific content) the reading assignment. Students work in groups on filling in specific sections of the diagram/matrix and share their section with the whole class **(CL127).**

To enhance listening skills: state that "today we are going to focus on listening skills in our small groups. Before you make a comment, summarize the point of the person who spoke before you." (**CT, 89).**

Dealing with problems: 1) monopolizing students: pose a question and ask all students who have a response to raise their hands. Call on a student who hasn't spoken. 2) share rules with students (no laughing during role playing; do not volunteer to speak until others have spoken); 3) refer to another student's comment and build on it while offering your own; 4) use "I" language rather than "you" language; 5) change the format (group size) or group membership; 6) ignore mildly negative behaviors and see if they will go away; 7) discuss very negative behaviors in private; 7) remember that problem behaviors probably have nothing to do with you but are due to personal fears and needs displaced toward a peer. Look for clues that this is the case (**101S, 30).**

Checklists for small group work: checklists facilitate "metacognitive moments," enabling students to self-monitor their learning. The checklist can be distributed to students at the beginning of the group discussion and collected from them at the end of the class session. The scale of 1-5 goes from 1 = demonstrate this skill consistently, 3 = occasionally, 5 = need improvement in use of this skill. Ratings are on : I incorporated prior knowledge into class discussion; asked questions of group members in an open -minded way; built on comments of other group members to enhance discussion; volunteered ideas in a constructive manner; helped the group to summarize its progress; identified missing information in the group effort; built on ideas from others. (**COL,74).**

Responding to student (or colleague) skepticism about group work: Students may balk at small group work and request "more lectures." A student may argue that she/he has paid tuition to listen to the instructor, not to other students in the class. There are several ways to counter the accusation that small group work entails "the blind leading the blind." One model is that of coach: when students work in small groups they are like a team practicing skills in a scrimmage. Although the teacher/coach is on the sidelines for the scrimmage, students are engaged in a supervised practice. The teacher is prepared to systematically intervene, critique the students' performance, offer advice, and redirect their activities. Students also need to become aware of the skills they are learning (oral communication, listening, managing conflict, sorting and evaluating information) while working in groups and of their long-term value to their education. Ask: in your future career, which skill do you think you will practice more - listening to your boss lecture or working with a team? (**EI, 165-68)**

In small groups, does an emphasis on consensus building make knowledge a product solely of negotiation? No, in bringing multiple views to the floor, and not only the professor's, a teacher shows that all arguments must be defended by appeal to rules of reasoning and the practice of rational dialogue. Neither the professor nor students can appeal solely to authority. Consensus is not built by quick, conforming acquiescence of group members to an arbitrarily advanced thesis. It is reached through dialectic conversation in which participants critically sort through all creative ideas. Does small group work devalue creativity and impose conformity on student? No, it gives free-thinking individuals a context in which to practice team work and enrich the dialectical conversation with their creative ideas. (**EI, 165-68).**

In-Class Writing

Short writing exercises can help students learn to assess their own learning and can assist instructors in receiving feedback from students on their teaching efforts. "Minute exercises" can include such things as 1) write down the most important idea they remember from the day's lecture or discussion; 2) pose a question upper most in their mind; 3) paraphrase a key paragraph from the reading; 4) write an answer to a descriptive question [e.g., describe three major concepts associated with today's lecture]; *and* 5) explain why an answer to an assigned question is correct. (**PAL, 24; UAL, 35).**

One instructor likes to read a few of the writing exercises she has collected aloud in class and explain why one is particularly well articulated or how one illustrates a common misconception (**CL 50).**

Peer-evaluation of writing exercises affords students opportunities to see and hear their own words from another person's perspective. Students also gain experience in assessing the quality of another person's writing (often students are better judges of their classmates' writing than their own). In one example, students exchange essay answers they have written for homework and peruse them while the instructor offers a mini-lecture on the material on which students have written the answers, highlighting main points. Students note in the margins strengths and weaknesses of their partner's writing, highlighting points articulated well and indicating points missed by their partner. Accountability is built into peer writing groups because everyone wants to receive fair and useful responses about their writing. (**PAL, 83).**

Note: collecting and redistributing to partners written exercises immediately at the beginning of class discourages students from postponing their homework and composing it on the fly during the mini-lecture. Asking a student to read aloud a particularly well written statement enhances learning. Students may initially be reticent to trust their judgment about good writing and will benefit when the teacher affirms their judgment. Moreover, sometimes students may make statements that are more complete and articulate than the mini-lecture itself! (**AL, 50).**

"Dialectical notebooks:" Students read the assignment outside of class and select 3-6 excerpts (passages they feel are critical to understanding the material, that particularly intrigue the student, or that the student questions or is confused by). Each student records the page number of the excerpt and a summary of it at the top of her/his notebook page, followed by commentary. In class, two students exchange notebooks and make comments of their own. Finally, the notebooks are returned to their writers, who enter a final response to the partner's comments. This activity can be followed by small group or whole class discussions, initiated by volunteers reading notebook sections. The instructor may ask a student to respond to a specific section or ask for a different perspective from another student on the same excerpt. This strategy enhances reading comprehension and enables students to gain insight about explaining and interpreting meanings for each other. (**CL, 132).**

"The Power of Two:" ask students to write about an assigned question (consider asking students to write on different questions reflecting different aspects of an assigned reading). After they have completed their paragraphs, arrange students in pairs and ask them to share their answers with each other. Each pair creates a new answer to each question, improving on each individual's response. Discuss answers as a class. (**101S, 106).**

"Self assessment of homework:" spend 3-5 minutes at the beginning of class asking students to reassess their homework. This helps them focus and begin to formulate cogent questions/concerns for class discussion that day. Students write on "what do you see as the weak/strong link in your response to the homework problem? Why?" (Can be collected early in class as roll-call, home-work check). **(UAL,53).**

Case Studies

Cases often require writing elaborate scenarios and assembling extensive packets of data. For that reason, instructors often rely on published cases in their courses. However, you can create your own cases from recent news stories, campus events, or developments in your professional field. Good cases have the following ingredients: a real or believable story, thought-provoking issues based on conflict, the absence of an obvious or clear-cut "right" answer, and a demand for a decision to be reached by critical thinking or analysis. Cases can be used for in-class discussion, writing assignments, or small group tasks.

> Example: a long-time dialysis patient is missing treatments, failing to control his diet, and abusing the hospital staff. One day he is rushed to the hospital in a coma and in need of immediate dialysis. Should he be allowed to die? Students are assigned roles of an ethicist with a utilitarian position, an ethicist with a deontological position, patient's wife, a staff member, a person on the dialysis waiting list, a member of the Hemlock Society, and members of the hospital board who must decide what to do. Students simulate the discussion and after hearing all arguments, go home to write a statement, assuming the role of the chair of the hospital board. (**EI, 131).**

The goal of case study work is to enable students to engage in active, enthusiastic conversation, primarily with each other, that flows from materials they have studied. Instructors facilitate successful case study use when they know the case inside and out, have set up the classroom to facilitate effective group discussion, and successfully raise questions and monitor discussions. Key questions include: what is the dilemma that this case posed? How do you interpret Ms. X's actions? Can you tell me what happened as a result of those actions? Does the decision Mr. Y made related to our text's theory? Which actions that Ms. X took have proved most important? What evidence is there in the documents to indicate Mr. N had a choice? What are the main points of this case, as discussed so far? Can you summarize the decisions that came out of this case? Some instructors find case studies more effective if students prepare pre-reports (to submit for credit) before coming to class. In discussions that begin the case study class discussion, students compare their reports and attempt to reach a consensus. (**PAL, 111-16).**

One professor creates groups that are either "Presenter" or "Discussion Leader" groups. Members of both groups must thoroughly analyze the case. "Presenter" groups are responsible for oral presentation of the case while "discussion leader" groups are responsible for initiating and maintaining discussion about the analysis of the case. "Discussion leader" groups also are expected to play the "devil's advocate." (**CL, 168).**

Evaluation of case studies tends to be summative (looking at end product) rather than formative. An instrument in **UAL, 49** enables students to track their own homework. Questions include: what did you do well in your analysis of the case? In your next case report, what will you do to improve and how will you do it?

Debates

Although debates work well with controversial issues, they also can be used successfully with any set of statements relevant to a class topic. An instructor can organize a set of statements produced by students and place them on the board (or overhead) without evaluation. The class can discuss each statement (by proof, refutation, counterexample, and so on). Students then can commit themselves by casting a vote for or against each proposition. Evaluation of this technique by students suggests strong support as long as the instructor provides appropriate minilectures to introduce and summarize the debates**, AL, 46.**

“Take a stand:” After a 15-20 minute lecture that highlights important aspects of the assigned reading, the instructor presents an issue that relates to the material. Students then choose a side for or against the issue and break into small groups with others who share their perspective. A recorder takes notes on the discussions. After 15 minutes, the class reconvenes and the recorders report back to the class. Discussions are lively as each group advocates for its perspective. Note: the instructor needs to encourage students to substantiate their positions by appeal to the assigned reading. (**CL, 116).**

The class is divided in half. Each half is divided into groups of 4-5 students. Each subgroup develops arguments for an assigned position. At the end of their discussion, they choose a spokesperson. The “pro” and “con” spokespersons face each other in the center of the room with their respective subgroups sitting behind them to act as coaches (they may pass notes with suggestions to their spokesperson). After an initial presentation of the debate points, the subgroups reconvene to strategize counter arguments. A new person is chosen as spokesperson and the debate continues (with more strategy sessions as time allows). The entire class reconvenes at the end (dissolving their pro/con affiliations) and discuss what they thought were the most compelling arguments on each side. (**101S, 84).**

“Trial by jury:” create an indictment which describes a “crime” such as a problematic literary character, a faulty process, law, or institution, a suspect theoretical explanation. Assign roles of defendant, defense attorney, defense witnesses, prosecuting attorney, prosecution witnesses, friends of the court, judge, jury members. Each role can be filled by a team of students. Allow up to an hour for students to prepare their roles. Conduct the trial of the character, idea, or theory using opening arguments, case presentation, witness testimony, friend of the court briefs, and closing arguments. Conduct a jury discussion (with everyone listening) **(101S, 92).**

****“Active assessment:” create a list of statements that will be read to the class to assess their views toward a given subject. Ask students to stand at the back of the room (moving chairs to side). On the walls, post signs that say “strongly agree,” “agree,” “disagree” or “strongly disagree” and ask students to move to the place in the room that best matches their views as statements are read. Have students discuss and share their views with each other and then with the entire class. Permit students to change groups as the discussion continues. Conclude the class with individual student writing on the statements **(101S, 138).**

“Author interview:” students can prepare dialogues in which they debate an author or otherwise engage an author in arguments with several protagonists. The student, as interviewer, can argue against an author’s views. Or, the student can invent an author’s response to another student who takes the role of interviewer. In a writing assignment, the student can write the dialogue of the interviewer and the author (**EI, 145)**.

“Author panel:” A variation on the author interview and like a TV interview show, small groups can function as panels in which one student takes the role of the author and other students assume roles of panelists with contrasting views. (**EI, 145).**

Drama and Role Play

"What if?" exercises enhance critical thinking skills, especially among students who tend to see the world from a single point of view - their own. Role play encourages decentering from the familiar, stretching thinking in productive ways. Example: "Hobbes said that we are obliged to obey the state only so long as it guarantees our security. How would he react to compulsory military service in time of war (e.g., Maimon and others)? Write a script giving voice to Hobbes and to critics of his position. " (**EI, 127).**

Role play could entail a lecturer debating (putting on different hats or other costumes) her/himself. This approach to a lecture, which literally embodies difference, incorporates active learning and improves retention of lecture material when students ask each character questions. Students feel safe because their question asking is itself perceived as role play. (**AL, 49).**

Consider role-playing an historical moment: Luther's debate with John Eck, for example. Or have students dress up as a figure (the Buddha) and tell the figure's story, staying "in character," through questions (**CT, 102).** Students also may create a dialogue: Luther and Erasmus on free will, Anabaptists and Roman Catholics on infant baptism, Muslims and Hindus on God; Frazer, Durkheim, and Freud on the origin of religion. Students need to invent a natural, persuasive conversation based on quotes from the characters. The instructor may wish to review drafts with students prior to presentation in class to make suggestions (and enhance "learning moments" in the drama). (**CT, 108).** An another example: you fall into a time warp and find yourself in a tavern with Aristotle, Hegel, Arthur Miller, and literary critic Robert Heilman. They are arguing about Miller's *Death of a Salesman.* Is it a tragedy? Luckily, you have been studying tragedy in class. Write a mini-play in which all of you debate the question of tragedy. (**EI, 130).**

"Pilgrimage:" To help students experience the dramatic, interactive aspects of a pilgrimage, walk with students around campus or through town, stopping at various points for each student to tell his or her story in a manner faithful to a researched understanding of the pilgrimage. Back in the classroom, students can write essays discussing his/her story in relation to those of their classmates and textual material. The instructor reports that because students see and feel the dynamics of pilgrimage, they tend to write excellent essays (**AL, 175).**

"Role reversal:" compose a set of questions that you would raise about a reading assignment if you were a student. Questions may include requests for clarification (would you explain again the way to …?), comparisons (how is this different from?), challenges (why it is necessary to …?), or requests for examples. Tell students that you are going to "be" them and they are going to "be" you. Instead of using this strategy at the beginning of a unit, introduce this technique when students are becoming complacent about their understanding of a certain unit. **(101S, 98).**

Role play on the fly: solicit a student volunteer to debate or discuss a class topic. Give the student her/his initial lines. After one round, ask the class for help. What should you say? What should the student volunteer say? Give students time (in small groups) if necessary to think about coaching suggestions. This strategy is a nonthreatening way to encourage greater student involvement in constructing role play about a class assignment (**(101S, 146).**
,
"The Power of Voice:" students are often unaware of the voice in narratives they are reading. They tend to read texts with their ears closed to the inflections of human discourse. Their reading comprehension can be enhanced when an assigned text is divided into speaking "parts" and students "perform" the readings. Students attain a sense of ownership over the texts. Dramatic readings also enable shyer students to enter into the larger discourse of the class (**QH, 19**).

"Performing your essay:" When students write an argumentative essay, they may be asked to prepare the "pro" and "con" positions in script format. Several of the essays may be performed in class. Students can ask questions and make comments, enhancing their comprehension of key themes associated with the essay. (**QH, 67).**

Discussion Techniques

Discussion facilitator tips (that model good discussion techniques for students): *paraphrase* comments of a student; *check* your understanding against the words of a student; *compliment* a useful insight; *elaborate* on a student's contribution; *energize* a discussion by using humor or prodding the group for more ideas; *disagree* with a student to stimulate further discussion ("I can see where you are coming from, but I'm not sure that is always the case. Does anyone have a perspective that is different from Jim's?); *mediate* differences ("I think Susan and Mary are not in total disagreement but are bringing out two different sides of this issue); *pull together* ideas to show links with each other; *summarize* the major views of the group. (**101S, 24-25)**

In the midst of a lecture, stop, pose a question, and ask students to turn toward three other students around them and quickly come up with an answer. Call on a group for their answer. Six questions per 50-minute lecture encourage students to complete assigned readings as background to the lecture, maintain alertness among students, and encourage active engagement with the lecture, spread responsibility for discussion among a larger group of students than traditional "does anyone have a question?" techniques. This technique also enhances instructor communication because she/he receives immediate feedback on the lecture material (**AL, 134).**

Active learning abilities are enhanced when students regularly have opportunities to evaluate the discussion. Students can process a discussion by asking questions such as: Did the discussion stay on the topic? Did you rethink your assumptions or point of view as a consequence of the discussion? Give some instances of particularly insightful comments. Who requested information, solicited ideas, or invited reactions? Who clarified the discussion by suggesting alternative ways of viewing the problem or restating the contributions of others? Did anyone raise her/his hand and was not called on? **(CT, 89).**

Maintaining focus in a discussion is critical for learning. Strategies that help include 1) redirecting the conversation ("Mary, your point is well taken, how does this apply to the question of God's existence?"); 2) jotting down on the board main points that emerge from the discussion and leaving time to summarize them at the conclusion of the hour (notify students at the beginning of the discussion that you will be calling on 2-3 of them to summarize the discussion for the rest); 3) jotting down problem areas that arise during the discussion and reserve time to address these areas and direct all students' attention toward them; 4) defusing tension with such comments as "Let's give Becky a chance to state her views," "we need to identify points of agreement and points of disagreement," "this discussion is not progressing. Let's move on to a different question." Or take a direct approach and ask students why they think the conversation is breaking down. (**CT, 88).**

"Town meeting:" Instead of calling on students from the front of the room, explain that you will be following a format where each student speaker calls on the next speaker. Whenever someone finishes speaking, she/he will call on a classmate whose hand is raised (and who has not previously spoken). Establish a time limit, if necessary. The same format works well also when students are divided into two groups to discuss a controversial issue and call on each other from across the room. The town meeting may begin with a panel of students representing a variety of views. After 10-15 minutes, the discussion can open for all. (**101S, 86).**

****"Fish bowl:" Students number off 1-3 and sit in two concentric circles. No. 1 students occupy the inner circle and discuss a topic for 10-15 minutes. Then they switch places with No. 2 students, followed after 10-15 minutes by No.3 students. (**101S, 87).**

"Mind maps:" select a topic or issue about which you want student to reflect. Distribute paper and marking pens. Ask students to begin their maps by creating a pictorial center, depicting the main idea under discussion. Encourage them to break the idea into smaller parts and depict these around the periphery of the map. Urge them to present their ideas pictorially, rather than with words. Have students share their mind maps with each other and with the whole. Goal: alternative method for outlining key ideas in a course unit. (**101s, 126).**

Journals

Ideas for daily journal entries: 1) summarize and react to a reading assignment or a class session; 2) work on paper ideas that are confusing. Question. Speculate; 3) write about peculiarities in the language you encounter in your reading; 4) look for connections between the topic currently under discussion and a topic encountered earlier in the course; 5) make connections between this course and another course you have taken previously. (**PSJ, 108).**

Technique: loose leaf paper in a manila folder (not a notebook). Students place most current entry on top. Instructor puts check mark at top of each new page. Read and copy for students sample entries and discuss their strengths and weaknesses; ask students to write for 10 minutes in an evaluative mode about their techniques. For evaluative techniques and other helpful details, see whole article. (**PSJ, 109).**

"Word journals:" ask student to sum up a reading or a video with one word and provide a 1-2 page rationale for choosing that word. This exercise enables students to practice summarizing and encourages them to think holistically, synthesizing and integrating ideas. This technique works less well with textbooks and better with the Bible, short articles, case histories, and short essays. It does not work well when the instructor wants students to come to agreement on one summary; it works best with materials that lend themselves to varied and diverse interpretations. Discussion in class in which students share their journal entries with each other enhances this strategy. (**CT, 102).**

MIT entries: periodic or daily journal entries may record the "most important thing" a student learned during a particular unit. One instructor collects these entries and posts them without attribution to students in their e-mail. Students comment favorably that the MITs assist them with summaries of the daily lectures, review of material, and immediate feedback. **(UAL, 62).**

Students may want to use the journal as a location to assess their more formal written work (e.g., essays). They may respond to questions such as: what do you think works well in your essay? Please give specific examples. What would you like to change and why? Is there any place in which your essay falls short? Why? Who is this essay's intended audience? Can you give examples of places in which you attempt to speak to this audience? How did you go about writing this essay? Did you do anything differently than in previous writing efforts? Why? On what one mechanical, structural, or substantive problem would you like me to focus while reading your essay? Why? **(UAL, 51)**

Note: students may want to do a comparative entry near the end of the semester, creating an overall assessment of their progress with writing. Questions may include: what skills does your final essay show that you have developed over the semester? Demonstrate that development in comparison with previous essays; what works particularly well in this essay? What decisions did you make during writing it that make it effective? **(UAL, 52).**

Speedy feed back on journal entries (and an alternative to grades): Check with a minus sign: appeared to put little thought into the activity; check: engaged the questions, but response needs more support, development, or explanation; check with a plus sign: good faith to excellent effort, position supported with details. (**UAL, 56).**

Cooperative Student Projects

Cooperative learning projects encourage 1) positive interdependence among group members (they sink or swim together), 2) individual accountability (each member needs to pull her/his own weight and be able to identify specific contributions, 3) face-to-face interactions, 4) interpersonal and small group skills, 5) group processing (regular self-evaluations by a group about the quality of contributions to the group, communication efforts, organization). These skills promote higher-order thinking and position students well for success in future employment. Examples of cooperative learning projects include: A) *study groups*: meetings outside of class to review readings, lectures etc.; B) *cooperative final exams*: in groups of 4-5 students are assigned to different parts of the classroom to write collective answers to exam questions; C) *peer writing groups*: students read each others' papers and receive feedback; D) *group-graded projects*: dividing up roles, students work over the course of a semester or part of a semester on a common project. Time is reserved in class regularly for consultation with each other and the instructor. Students assign each other a grade as a means of ensuring accountability. (**PAL, 74-88).**

Study groups benefit from clear guidance. Offer instructions such as: Clarify the contents, create *X* number of examples, illustrations, or applications of the information or ideas, identify points that are confusing or with which you disagree, argue with the text and develop an opposing point of view, and assess how well you understand the material. Assign jobs such as facilitator, timekeeper, recorder and request written notes and comments from each (rotate the jobs) in order to document completion of above listed goals (**101S, 101)**.

Evaluating group process: at the end of a class meeting to work on group projects, each group reports on the following: What did each member do that was helpful for the group? What could each member do to improve the working of the group? (**CT, 89)**

A more formal evaluation could be created by each student for every member of the group. An excellent form is found in **COL, 76.** Behaviors are listed under categories of: demonstration of professionalism in regard to team project; demonstration of initiative in regard to project; demonstration of effectiveness in independent work. Overall suggestions include: what specific suggestion would you make to this individual for work on future group projects? What was the individual's most valuable contribution to the group?

Student Presentations

Presentations are preceded by asking students to develop an "instructional plan" for the presentation they will give. Drafts of the instructional plan are evaluated by the instructor and suggestions are offered for improvement. Students are grouped together by common presentation topics and critique each others plans. This process enables students to think about principles of effective learning and not only about their chosen topic. Sequenced and peer evaluation also create a community of professionals in which everyone's contribution is expected to be carefully formulated and reacted to in a serious and engaged manner. (**CL, 152).**

"Workshops:" the familiar student presentation may be cast as a workshop and students may be expected to involve the class in using experiential exercises, role play, video etc. By encouraging peer interaction, students gain a heightened sense of responsibility for their own learning. They may rethink the model of authority they have anticipated using in their presentation, in which their peers are silent and passive receptacles of their knowledge (**CL, 164).**

Learning contracts: These contracts can be used for preparing for student presentations, for organizing individual projects, or by a group. In the case of student presentations, in addition to choosing a topic for presentation, each student will prepare a written contract that states 1) the learning objectives the student has for her/his classmates, 2) the specific knowledge or skills to be mastered by her/his classmates, 3) the learning activities that will be utilized during the presentation (lecture, small group work, video), 4) strategies for showing that learning objectives have been achieved. Contracts make learning goals in student presentation efforts explicit. (**101S, 130).**

Practicum preparation: Active learning can be enhanced when "presentations" are renamed "teaching practicums." Students are asked to prepare pedagogical guidelines on which they will draw in teaching a course unit on a given topic. Students benefit from individual conferences with the instructor to map out their teaching practicum and discuss the pedagogical guidelines they have developed. Guidelines may include the following: Objectives: what important ideas, themes, issues or topics will you share with the class (no more than three with subsets as necessary)? What should members of the class be able to do with these ideas, issues, or topics when the lesson is finished (recall, list, identify, differentiate, classify, compare, contrast, locate, plan, apply, design, evaluate, select)? In what learning activities will your classmates engage during your practicum (e.g., listen, read, discuss, brainstorm, analyze, problem-solve, demonstrate, video, case studies, simulation, guest speaker)? In what ways will these activities support the fulfillment of your objectives? Interactions: during your practicum, who will be talking and working with whom? Who will initiate interactions in the class? Tools: what tools will your classmates need if your practicum is to be an effective learning experience for them? For example, do you have homework readings for them? Worksheets? Discussion questions? Context: how will the classroom be set up? How long will students work on each activity you have planned for them? Assessment: what criteria will you use to assess whether students have met your learning objectives? How will they know if they have met your objectives? What kinds of feed-back will you plan for them? (**TT, 122;)**

Reserve class time for students to conduct paired interviews about their proposed presentations. Students can talk through their ideas with each other. You may guide the discussion by giving them a series of questions: what problem or question is your presentation going to address? Is this question controversial or otherwise problematic? Why is it significant? Why is your question a good one to address? Can you walk me through steps in your presentation? The interviewer's task is to keep their partner talking for 10-15 minutes. She/he should offer suggestions, bring up additional ideas, request clarification, play devil's advocate, request clarifying information (e.g., what are you going to discuss next and why?). (**EI, 220.)** Note: this same strategy can be used for students to discuss essays or research papers on which they are working.