



# Techniques for Your Toolbox

USING VARIOUS LEARNING STYLES

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### Using various learning styles

#### 1. Brainstorming

Steps:

- Present an open-ended question for participants to discuss or solve.
- Students can work individually, in pairs or small groups, or as a class (or combination of these).
- Have students share ideas with class, making notes on the board, flipchart or piece of paper.
- Have each group report out. Discuss and share any information needed. At the end, correct any misconceptions, note opposing points of view, and summarize main points.

Value: promotes critical and creative thinking and imagination.

Learning Style: Visual, Auditory, Kinesthetic

#### 2. Decision Making

Steps:

- Provide participants with a problem that they need to work on for example “Imagine you have a participant in class who is monopolizing the conversation...”
- Ask participants to work in groups (2-4 students) to develop a plan to deal with the situation.
- Have participants share ideas with class, track all suggestions from each group.
- Discuss. Determine any challenges or issues with any of the suggestions. Eliminate ones that the group determines aren’t the best choices. Create the list of the best practices.

Value: promotes integration of ideas, critical, creative thinking, provides immediate feedback about student understanding.

Learning Style: Visual, Auditory

#### 3. Group Graphic

Steps:

- Have participants get in pairs or small groups.
- Ask the pairs or groups to illustrate curriculum content by constructing a picture, diagram, flowchart, concept map, or some other visual illustration that represents their understanding of the content.
- Have participants report on their group graphic to the rest of the class, explaining what is represented and why (their representation might also include questions, unknowns, etc.).
- Have other groups respond with questions, feedback or suggestions, and you can also provide feedback to help clarify questions, point out misconceptions or oversimplifications, or correct errors. You can also have groups turn in their illustrations for you to scrutinize after class and later hand back with feedback.

Variation for Large Classes: Have small groups assign roles such as recorder (person drawing), facilitator (ensures everyone participates), reporter (will report on illustration), and participants (contribute to discussion). Once the graphic complete, have the reporters from each group go to a different group and report on the illustration, receiving feedback from the other group. Some instructors provide markers and large post---it notes or pieces of paper and tape to adhere illustrations to a wall.

Value: promotes integration of ideas and thinking, facilitates attention on the “big picture” and relationships among ideas, and allows for creativity in thinking and expression

Learning Style: Visual, Auditory

#### **4. One Minute Paper**

Steps:

- Have participants take out a blank sheet of paper,
- Pose a question/issue/problem to them.
- Give them one or two minutes to write something down.
- Have the group come back together and do round robin sharing.

Value: Shows how participants are viewing the material and what you might need to focus on next. Gives participants a chance to review what they have learned and helps them determine if they have questions about the content.

Learning Style: Visual

#### **5. Muddiest Point**

Steps:

- Have two participants pair up together.
- Have them determine “the muddiest” point/concept/topic so far in the session.
- Ask them to determine questions to ask so they can become clear on the point/concept/topic.
- Come back together as a large group, have each dyad share their “muddiest” point and share their questions.
- The instructor/trainer can then answer the questions or open to class discussion.

Value: Promotes problem solving, examining issues from all perspectives and teamwork.

Learning Style: Visual, Auditory

#### **6. Yes/No/Unsure**

Steps:

- Create three signs – one with the word Yes, one with the word No and one with the word Unsure.
- Hang each of them on a separate wall in the room where the session takes place.
- You will have questions created from the course material that can be answered with a yes/no/unsure. You will be using this as a way to review material you have already covered.
- Ask one of the questions and ask the participants to move to the correct answer – Yes or No. Or to go to Unsure if they really cannot decide.
- Once everyone has chosen an answer, ask those in each area why they picked the answer they picked.
- Once that is completed, share the correct answer. Have further discussion if needed.

Value: A great review technique that gets participants moving. Easy energizer.

Learning Style: Visual, Auditory and Kinesthetic

#### **7. Fishbowl**

Steps:

- This activity can be used to do review or try to help their fellow participants solve issues that have taken place at work. Ensure no names are used to insure confidentiality.
- Each participant is given an index card on which they list the review question or share their work issue.
- The instructor/trainer collects all of the cards and puts them into a fishbowl or basket.

- The instructor/trainer proceeds to draw an index card and share the question (if it is a review) and ask for responses. Or read the work issue (if more in-depth) and ask for solutions.
- It provides participants with the chance to share what they know and for the instructor/trainer to address incorrect assumptions or share the course approved response/materials.

Value: Provides a chance for participants to share their expertise, promotes problem solving.

Learning Style: Visual, Auditory

## 8. Finger Signals

Steps:

- Participants are asked questions on the materials content and instructed to signal their answers by holding up the appropriate number of fingers immediately in front of their torsos (this makes it impossible for students to "copy", thus committing them to answer each question on their own).
- The instructor/trainer might say "one finger for 'yes', two for 'no'".
- Helps the instructor/trainer assess how well the students know the content. Requires that the instructor/trainer have the questions prepared in a yes – no format.
- This can also be accomplished with flashcards – Yes or No

Value: Provides immediate feedback on participant understanding of the materials, easy to implement and to use with large groups.

Learning Style: Auditory and Kinesthetic

## 9. Role Playing

Steps:

- Warm up the group – This step involves presenting participants with a problem, providing examples, and having students predict what might happen.
- Select participants – In this step, the characters and their characteristics are identified and volunteers come forward.
- Set the stage – A line of action and the setting are established and the roles are restated.
- Prepare the observers – To make sure that the whole group stays involved; the instructor/trainer is encouraged to assign them tasks. For example, the observers could evaluate the realism of the role playing, respond to the effectiveness and sequences of the role players' behavior, and define the feeling and ways of thinking of the persons being portrayed.
- Enact – The players assume the roles and spontaneously "live" the situation from beginning to end of the situation.
- Discuss and Evaluate – In this step, the action of the role playing is reviewed, the focus is discussed. Are there more questions? Discuss if there are solutions/options/methods to use.

Value: Helps the participants understand the situation or issue.

Learning Style: Auditory and Kinesthetic

**10. Case Study** - Documented study of a specific real-life situation or imagined scenario, used as a training tool. Participants analyze the prescribed cases and present their interpretations or solutions.

Steps:

- Can be done individually or in small groups.
- Provide the case study to participants. Have them read it and try to determine the following:
  - What is the issue(s)?
  - What would be a good goal to strive for considering the situation? Some professions have mandates that need to be followed.
  - What are the key facts in the case study?
  - What options or alternatives are available in this situation?
  - What would you or your group recommend be done in this situation and why?
- Discuss or Reflect and write down the answers to the questions above.
- Return to the large group and discuss the issue in depth. Instructor trainer can provide more information or share solution used/results with the group (if a real-life situation).

**Value:** Promotes problem solving, increases proficiency with analytical tools, quantitative and/or qualitative, depending on the case, improves decision making in complex situations, helps participants learn to cope with ambiguities better.

**Learning Styles:** Visual, Auditory

**11. Jigsaw** - Jigsaw is a cooperative active learning exercise where students are grouped into teams to solve a problem or analyze a reading. An individual or small group of people complete a different portion of a larger assignment and then contribute their knowledge to the class as a whole. The jigsaw comes from the bringing together of the various ideas at the end of the activity to produce a solution to the problem.

**Steps:**

- 1) Share information about an overall large assignment that has many components or sections. Assign each individual or small group of people with a section or specific part of the overall assignment.
- 2) Provide time for participants to work on their section of the assignment. Determine whether they will need additional materials, access to resources or to just have discussion.
- 3). Have them document what their results are and have them present their section to all of the other participants.
- 4) Provide feedback to each person or small group on their section.
- 5) Review the main points of the overall assignment with the whole group.

**Value:** Increases the ability to explore substantive problems or readings, help with the engagement of all students with the material, improves how participants learn from each other and critical analysis of a diversity of ideas.

**Learning Styles:** Visual, Auditory and Kinesthetic (depends on participants approach)

## **12. Labeling a Diagram**

**Steps:**

- 1) Each participants is given an unlabeled diagram or picture.
- 2) They must label it with the correct terminology in a specified amount of time. Instructor/trainer decides if notes can be used for the activity.
- 3) Once time has expired, review the correct answers for the diagram with participants.

**Value:** Great review activity to increase recall, helps participants visualize needed visual.

**Learning Styles:** Visual, Auditory

### 13. Terms and Examples

Steps:

- 1) Participants are given a term or terms for which they have to generate examples of given a concept, problem, situation, or principle (how it would be used, addressed, what it is connected with, etc.) For example – “Transdermal” Fentanyl is an example of a transdermal medication. A patch which has the medication in it, is placed on the skin so the medication can be absorbed through it. An example for this would be for them to define the term and then share how it is used– the CBRF worker washed his hands, opened the transdermal packet of Fentanyl and then placed the patch on the resident’s arm.
- 2) Each participant or small group shares their example with the large group.

Value: Generating examples increases recall, helps visual learners “visualize” what the process is which increases their ability to do the task, easy review process.

Learning Styles: Auditory and visual

### 14. Three Point Summary

Steps:

- 1) After presenting a section of new information, call on a participant and ask them to pick out three points or three things to remember.
- 2) As they are sharing the three points, write them on a whiteboard or flipchart.
- 3) Ask the rest of the participants if they have anything to add.

Value: Helps participants review and improve their memory of the materials.

Learning Style: Visual, Auditory

### 15. Matrix

Steps:

- 1.) Participants should create a table with information to compare (i.e. pros/con, two different processes).
- 2) Ask students to work in groups (2---4 students) to fill out the table.
- 3) Have groups share their ideas with the class. Capture key ideas on whiteboard or flipchart.

Process	Value of Process	Limitations of Process	When would you use this process

Value: Promotes integration of ideas, allows participants to easily compare ideas and reduce complexity.

Learning Styles: Visual, auditory

**16. Quick Thinks** - For each of the following, use immediate material from lecture, and allow students a couple of minutes to reflect before surveying their responses (have students share aloud, and you can collect written responses for participation points)-

- Correct the Error: Present participants with a statement, equation, or visual that you have intentionally made incorrect and have them correct the error. The error may be an illogical or inaccurate statement, premise, inference, prediction, or implication.

- Complete a Sentence Stem: Present participants with a sentence starter and have them complete the sentence. The completed statement may be a definition, category, cause---and---effect relationship, rationale, controversy, etc. Try to avoid statements that ask for rote knowledge.
- Reorder the Steps: Present sequence items in the wrong order and have students re---order the sequence correctly. This might be a process, cycle, method, plan, technique, etc.
- Interpretation/Paraphrase: Let participants know that you will be calling on them at random during your sharing of the materials and asking them to interpret what you've said, putting the material in their own words. When you are ready, pause for a moment to signal that you are about to call on someone. Once a participant has shared, you can have another participant add more. You can also have participants work and share in pairs.
- What do You See? Present participants with an image, such as a picture, symbol, graphic, equation, etc., and ask them "what do you see?" The image can be something new or familiar to participants. The idea is to ascertain if they can identify noticeable patterns, discrepancies, unusual features, and so on. You can also present an intentionally altered image to determine if students can identify what is wrong or missing or suggest how to correct it.
- Reach a Conclusion: Present participants with some data, opinion, event, or solution and have them infer logically the implications of the facts, concepts or principles involved. Their conclusions can be probably results, probable causes or outcomes.

Value: these exercises foster attentiveness, provide immediate feedback about student understanding, and promote critical thinking skills.

Learning Styles: Visual, Auditory

### **17. Strip Sequence**

Steps:

- 1) Provide participants with an out of order list of step in a multi---stepped process (can be written on small strips of paper or on a PowerPoint slide).
- 2) In groups or individually, have participants put the "strips" into the correct order from beginning to end.
- 3) Have participant groups compare answers with another group.
- 4) Review order and answer questions (especially to clarify misconceptions) for the whole class.

Value: promotes critical thinking and collaborative learning.

Learning Styles: Visual

### **18. Think Aloud Inquiry**

Steps:

- 1) Present a particular problem, ideally one that can be solved in a relatively short timeframe (or, for a more complex problem, the method of inquiry via which you would go about solving the problem can be presented).
- 2) Next, literally talk aloud in front of participants how you would go about engaging the problem. You might say, for example, "Okay, for this particular problem, first I need to clarify the nature of the problem. Do I understand what is at stake? From what is given here, I understand it to involve x,y,z. Given this, the next thing I need to do is consider...." And so on. The idea is to demonstrate explicitly your thinking process so that participants can literally observe/hear "thinking in action" as one moves through a basic process of problem---solving (e.g. identify the nature of the problem, analyze the

knowledge or skills required to engage it, identify potential solutions, choose the best solution, evaluate potential outcomes, report on findings, etc.).

3) Next, have participants form pairs and assume the roles of “problem---solver” and “listener.” Then present a problem for them to solve. The “problem---solver” is to read the problem aloud and talk through the reasoning process in attempting to solve it. The role of the listener is to encourage the problem---solver to think aloud, describing the steps to solve the problem. The listener can also ask clarifying questions or offer suggestions but should not actually solve the problem.

4) Present yet another problem and have participants switch roles.

5) After an allotted amount of time, have participant pairs share their experience. Did they actually solve the problems? What obstacles or breakthroughs did they encounter? How did it feel to talk aloud or listen to “thinking in action”?

Value: promotes critical thinking and inquiry, attentiveness, and collaborative learning.

Learning Styles: Auditory

**19. Reflect Activities** Learning is enhanced if we are given a chance to reflect, review, and personally relate to the material and how we might apply it. Give participants a log or journal, then use a variety of ways to have participants stop and reflect periodically for a few minutes on what they’ve learned and how they might use it.

After the reflection time you can have them volunteer to share, share in small groups, or not share.

Here are six examples:

1) Most Important: Write three things you just learned. Now put a star by the most important.

2) Three Applications: Write three ways you can use or apply what you’ve just learned. Circle the one you plan to do first.

3) One Sentence: Write one sentence explaining what you learned in the last \_\_\_\_\_ minutes.

4) One Question: Write one question that you have about what you’ve heard.

5) Wow / How About: On a sticky note, write a “WOW”—something you learned that was important to you. On another sticky note, write a “HOW ABOUT”? question or other idea you might have. Post your notes on the two flip charts (labeled WOW and HOW ABOUT). Build in some time to debrief the two charts.

6) Highlights: Spend the next four minutes reading and reviewing the notes and the other information in your packet. Highlight the important points. Write any questions you still have. Similar to three point summary.

Value: All of these activities help increase understanding of material, increase critical thinking and provide feedback to the instructor.

Learning Styles: Visual

## **20. Summarize**

Having learners summarize, in a sentence or two, the most important things they have just learned is another powerful way to have them interact with the content and fix it in their minds. Here are 7 fun ways they can share their summaries with others.

1) Best Summaries: On an index card, each participant prepares a summary of the main points at the end of a segment or topic. On the other side of the card have them put a code or identifying PIN. Put participants into small groups, collect their cards and exchange them with another small group. Then



each small group selects the best summary from the set of cards they were given. Each small group reads the summary to the whole group. Also read the identifying PIN so the author can be congratulated.

2) **Important:** After a presentation, ask participants to identify the most important piece of information or concept that you presented. Give them time to think and jot an idea down. Ask for responses. Then ask them to share that with a partner. Take a few responses in the whole group.

Value: promotes critical thinking and collaborative learning.

Learning Styles: Visual, Auditory

## **21. Showtime**

Steps:

- 1) Divide participants into small groups.
- 2) Assign small group with a portion of the material that was presented by the instructor.
- 3) Have each small group prepare and give a short, creative recycle presentation of the material.

Value: Great review activity to increase recall, promotes critical thinking and collaborative learning.

Learning Styles: Visual, Auditory and Kinesthetic

Compiled through the following sources:

- Angelo, Thomas A., and K. Patricia Cross. 1993. *Classroom Assessment Techniques: A Handbook for College Teachers*. 2nd Edition. San Francisco: Jossey Bass.
- Barkley, Elizabeth F. 2010. *Student Engagement Techniques: A Handbook for College Faculty*. San Francisco: Jossey--Bass.
- Davis, Barbara G. 1993. *Tools for Teaching*. 1st Edition. San Francisco: Jossey Bass. [see Chapter 16,
- "Supplements and Alternatives to Lecturing: Encouraging Student Participation," pp. 131---139]
- Handlesman, J., S. Miller, and C. Pfund. 2007. Chapter 2, *Active Learning in Scientific Teaching*. New York: W.H. Freeman and Co.
- McClanahan, E.B., and L.L. McClanahan. 2002. *Active Learning in a Non---majors Biology Class: Lessons Learned*. *College Teaching* 50(3): 92---96.
- Nilson, Linda B. 2010. *Teaching At Its Best: A Research---Based Resource for College Instructors*. 3rd Edition. San Francisco: Jossey---Bass. [see Chapter 12, "Making the Lecture a Learning Experience," esp. pp. 117---122]
- Thiagi's *Interactive Lectures* by Sivasailam Thiagarajan, 2005, and *Presenting with Pizzazz* by Sharon Bowman, 1997.

Additional examples and resources can be found at:

50 CATs by Angelo and Cross – Compiled by Cunningham and Moore

[http://tep.uoregon.edu/resources/newteach/fifty\\_cats.pdf](http://tep.uoregon.edu/resources/newteach/fifty_cats.pdf)

Classroom Assessment Techniques (CATs) – UO Teaching Effectiveness Program

<http://tep.uoregon.edu/resources/assessment/cats.html>

Classroom Assessment Techniques (CATs) – Center for Teaching, Vanderbilt University,