For

Faculty Development

15 X *Y* = ?:

Ideas for Student Engagement You Can Multiply

Presenter

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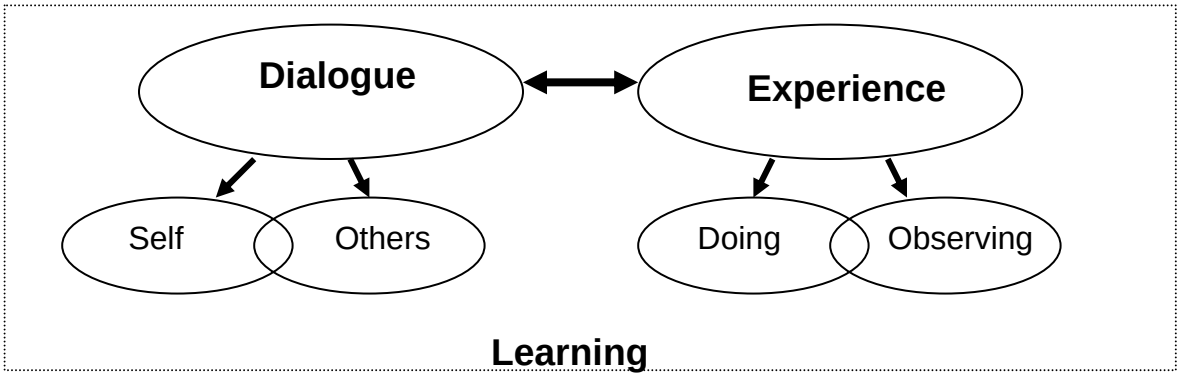
Workshop Goals:

- To enact engaging lessons through student talk and writing
- To value student engagement as a means for extending recall of content
- To value student engagement as a means for creating complex, professional understandings of content
- To experience student engagement processes
- To create instructional tools for engaging students in learning

A Quick Guide to Engagement



Dialogue with Self:

- Reflective essays
- Journals
- Portfolios
- Posters
- Concept Maps
- Answer questions
- Create questions

Dialogue with Others:

- Readings
- Think/Pair/Share
- Cooperative exercises (e.g. short, in-class problem-solving tasks)
- Collaborative projects
- Discussions
- Debates
- Interview practitioners (face to face, phone, email)
- Presentations to class

Observing:

- Modeling by instructor; think aloud problem-solving
- Modeling by more advanced students
- Data collection
- Videos; animations; simulations
- On-site visits, field trips
- Service learning

Doing:

- Design something
- Critique something
- Demonstrate something

- Analyze data
- Present work in progress
- Model for colleagues
- Think aloud problem-solving
- Perform
- Practice, reflect, revise, present
- Role play
- Instruct, teach
- Experiment
- Case study; simulation

Implementing Active Learning

- Start at a level you feel comfortable and gradually expand
- Start by implementing "dialogue" or "experience" of some sort in each lesson; eventually structure lessons around the interaction of "dialogue" and "experience"

***EXAMPLE**: Students read assignment and bring a question and an observation about the reading to class. Students form small, ad hoc groups to answer each other's questions and compare observations. Groups choose the most significant question from their group and report the question and their answer to the class (or if they cannot answer the question, you answer it).*
Dialogue with self, and others; experience in doing and observing are all in this design. Identify where each of the four elements occurs.

- Use "variations on theme" to tailor activities to your learning goals

NOTES and IDEAS

Student emotional states

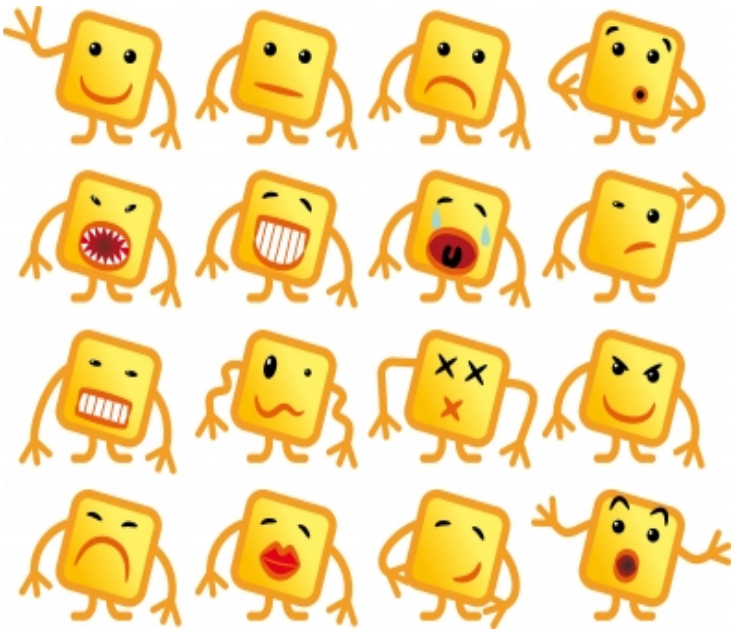
Students' emotional states affect how and how much they learn.

Students who are highly anxious, for example, about math or public speaking or writing struggle with those tasks. Expressing those fears can help them deal with them directly and help you know more about what might block their learning.

Activity
Have students look at the characters below and select (circle) the one that best displays the student's feeling about the course, or topic or skill set to be learned. Ask them to identify, as specifically as possible, what about the course, topic or skill that leads them to feel as they do.

Options for processing:
Have students find others who have selected the same one to talk about 1) what led them to make their choice and 2) how their emotions affect how they learn.

If the selection is negative, have them figure out how to help each other with the same concern.
If positive, have students explain to the group how they achieved their positive response and how others can, too.



Options for use:

What other images can you use?

For what other purposes can you use this or similar activity?

What new idea does this activity spark in your thinking?

Who do we have here?

Students get more engaged and do so faster when they know with whom they are working. Creating some community helps built a sense of shared responsibility and eases tension. As you get to know your students, you are better able to assess their progress.

Activity
Give each student a 3 X 5 card and safety pin.

Direct students to number 1 to X (however many questions you decided to ask) and answer a series of questions you dictate or post on the board. *For example: 1) What foreign country have you most recently visited? 2) What is the last book you read? 3) What is the first major news story that you recall? 4) What is your favorite sport to play?*

Collect the cards, shuffle them, and pass them out randomly. The students' task will be to find the person who answered the questions as they did and return the card to the owner; encourage them to take a minute or so to chat with each other.

Once everyone has been found, direct students to write their names on their card and pin it on. (Pass out some large markers to ensure names are readable from a distance.)

At the end of class, direct the students to take the name tag off, close the pin and leave it with you.

Options for use
What other uses can you make of the cards?

Job Descriptions

Students with clear goals for learning are motivated and engaged. However, some students have never had opportunity to reflect on the connection between the job or career they hope to have and the job of being a student. If education is going to be valuable, students must see it as their primary employment.

Activity

Four Do's for writing a good job description[1].

1. Make specific statements. For example, rather than stating that a maintenance worker keeps up equipment, it is better to spell out that the position requires performing routine maintenance on assembly machines, including adjusting settings; cleaning and lubricating shafts, gears, and bearings; and dismantling and replacing defective parts.

2. Use accurate adjectives. Include adjectives that describe the pace of work ("deadline-driven," "fast-paced") or the work environment ("enclosed area," "noisy setting"), but avoid flowery and overly long descriptions ("cozy but comfortable work environment that encourages creativity"). Try to use words that capture the essence of the position.

3. Use correct terms. To avoid confusion or misunderstanding, pay attention to whether you're using these terms properly:
   - A task or duty is something performed.
   - A responsibility is something that, although it may or may not be performed by the individual in the position, the individual must oversee.
   - Qualifications are skills and experience the person must have in order to perform the position.

4. Use a consistent style. Avoid mixing informal and formal language. For example, "The position requires flexibility in scheduling. *FYI, hang loose.*"

Direct students to write a job description of a successful student in the course. This will take some time for students to reflect on their task and articulate it clearly. Allow students to work together on the task.

Once completed, have students write a job description for the job each hopes to have as a career.

Direct students to look for connections between the student job and career position and discuss ways to connect them.

Options for use
This exercise serves to help students put their educational work into perspective and it facilitates developing excellent writing skills. What other ways can you use this exercise or some version of it?

1 Adapted from: *13 Job Description Dos and Don'ts.* (2010). Employer Resource Institute. 1819 Polk Street, #290, San Francisco, CA 94109.

Carousel

When students combine memories to accomplish tasks, they have resources to create more complex products. *The carousel activity works students' memories, invites them to get their memory right and, potentially, to apply information recalled to relevant problems.*

Activity

The end of a significant unit of instruction often merits some review and processing by students of the content in it. The carousel is a great way to get students talk about material in ways you can't get with other assignments.

1) Using poster paper or butcher paper, create stations that pose topics or questions you think are most crucial for their understanding of content.

For example, if you are finishing a unit in a nursing course on "The meta-nursing paradigm", you may post six posters around the room; one for each of six central concepts: (1) self-care, (2) self-care agency, (3) therapeutic self-care demand, (4) self-care agency, (5) nursing agency, and (6) nursing system. (Choose the number of topics posted so that you have from 2-5 students at each poster.)

2) Have students count off by the number of posters so all "ones" go to poster one, "twos" to poster two and so on. (Hint: if possible, provide each group with a marker of a specific color to use throughout the carousel—that way you know what group made what contribution.)

3) Give the students the directions: "During the next three minutes, note on your poster the significant ideas you recall related to the topic at the top of the poster. Use the marker I gave you and keep it with you. Go!"

4) When three minutes are up, have students move clockwise to the next poster. Give the directions: "Read what is on the poster so far; correct any mistakes you see; **add at least one new idea**. You have three minutes. Go!"

5) Repeat step 4 until students return to the poster where they started. Give the directions, "Review your poster. Make any needed corrections. Take five minutes for your group to **organize** a 1 minute oral summary of the significant ideas related to your concept."

6) Have students present summaries.

Options for use
Instead of having groups create a summary (step 5), have them create a significant question raised by the comments on the poster, or….(what other variations can you think of?)

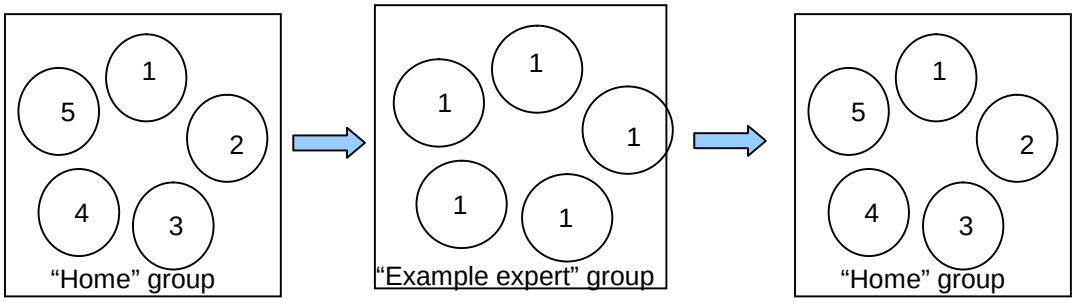
Jigsaw

Often students have trouble processing reading assignments. Lecturing on the topic often doesn't help because you do the processing, not the students. *We know that we often learn a topic best by teaching it to someone else.*

Activity

1) Divide the reading assignment content into sections you feel are significant and relevant. Shoot for enough sections to give a section to groups of two to four students. (If you don't have enough unique sections, you can split the class in halves or give the most complex sections to two groups—some sections will get treated by more than one group but not all will—that's OK!)

2) Have students count off by the number of sections you want them to treat. Have them count off to form "home" groups and direct them to note who is in the group; then immediately direct all "ones" to make a group, all twos and so on, forming "expert groups."



Step 2 Step 3 Step 4

3) Direct each expert group to review the section, determine the most difficult sections to understand, and create a presentation to explain those sections.

4) Direct the student to return to their home groups and take turns presenting their sections to each other.

Options for use
The jigsaw can be used for review, too. Provide to expert groups specific topics you anticipate need reviewed. What other uses can you make of it? What modifications for those uses are necessary?

I'm quoting you on that!

Good reading skill is marked, in part, by the ability to judge what statement/s or passage/s are the most important relative to others. Good reading skill is also marked by comprehension and connection. *Students need opportunities to practice good reading skills.*

Activity
When you assign a reading, add the requirement that students choose what they think are the three most important segments of the reading. (You may want to limit the length of any segment: minimum length-a sentence; maximum length-a paragraph.) Direct them to bring their quotations written on 3 X 5 cards including the page numbers of the quotations.

If possible, have students seat themselves in a circle to facilitate interaction.

Using the order of quotations as they appeared in the reading, ask students to:

- read the quotation selected,
- explain its meaning and
- explain why it is important to what the class is learning.

If more than one student has selected a passage, direct all who selected it to join in at the same time rather than doing repeated discussions of the same quotation.

Options for use
One option is for you to create the quotation cards to control what students discuss. This option gives you opportunity to feature specific bits of the reading; if you have especially weak readers, it provides opportunity to explain what makes a “quotable” passage.

A second option is to collect all the cards and shuffle them. Pass them out to the students and, in turn, have students read a quotation, explain how they understand it, and say whether or not they think the passage was “quotable”. What variations or uses come to mind?

Mapping the territory

If you look at student notes, typically they amount to a list of fragments—words or phrases in a list down the page as if all the fragments are of equal value and as if they always follow one after another. Complex knowledge and skills have have *hierarchical relationships* and *directions of influence. Students need to learn how to organize abstract material.*

Activity
Explain to the students what a concept map is. The most important benefits of maps are that they make visible *hierarchical relationships* and *directions of influence.* Use the resource below to provide student with examples of different sorts of maps.

Divide the class into groups of 3-5 students.

Provide the students

- a list of the significant concepts, terms, names, dates, etc. from the chapter/s or unit you want them processing;
- a sheet of chart paper or butcher paper
- a box of crayons or markers (the crayons seem to always be a hit!)

Direct the students to develop a map of the list you provided; as they work, have them develop *explanations for placement* of list items, *indications of direction of influence* of the items on each other.

Post the maps on the wall and have the class circulate to view them all and vote for the top three maps using adhesive dots, small post-its, tic marks on the corners or any other convenient means.

Ask the three groups to explain the maps and how they made their decisions in creating the map.

Options for use
After creating the maps, have groups trade maps, and direct groups to create a presentation using the map received. You may find that students want to talk about their efforts to make sense of their colleague's map—different conceptualizations lead to different understandings.
For online, or hybrid courses, you can accomplish the project using CmapTools or CoSketch (Just Google these.) What other ideas come to mind?

Resource
http://cmap.ihmc.us/publications/researchpapers/theorycmaps/theoryunderlyingconceptmaps.htm

Organize the files

While students may have difficulty seeing the organization among ideas in their notes, they must regularly organize files on their computers or other devices. Students can use *that* skill to help organize the relationships between significant concepts, terms, names, dates, etc. from the chapter/s or unit they studying. *Use students' existing skills to develop new ones.*

Activity
Provide students with a list of significant concepts, terms, names, dates, etc. from the chapter/s or unit they studying.

Using paper of different sizes or colors, direct students to create “folder” and “file” names for topics on the list you provide.

Have them place the files in the folders. When finished, have students cluster into small groups of three or four and explain their folder/file structure to each other.

Ask each group to select the most effective structure to show the rest of the class.

Options for use
Try doing this same activity as an *introductory activity* to preview the chapter or unit content. At the end, do the same exercise and have students discuss the changes they made in “filing” as a result of their study and instruction. What other uses come to mind?

“Here's what I think...”

Students learn NOT to talk as they learn. However, we know that, outside the classroom context, many people talk out loud when trying to solve a problem (maybe you do; I do sometimes.) Think aloud problem-solving can help concentration, and it can model how to think through a problem. *Students can benefit from hearing themselves or others talk through problems.*

Activity
This works well when students are learning new processes, formulas, or when they are learning to apply abstract concepts to practical problems (e. g. calculating dosages of treatments for patients of differing ages, body sizes, etc.).

Direct students to pair up and decide who is “A” and “B”. “A” will be the first problem solver and “B” will be listener and questioner if A gets stuck (but refrain from taking over and solving the problem!)

Give A's a problem to solve and get them started. B is to listen, ask questions and observe the process for A. Have A and B change roles for as many rounds as you feel are necessary.

Once you end the rounds, discuss the process of problem solving; what variations on the process seemed to work? Which ones seemed to lead to dead ends or mistakes?

Options for use
After each round, have 2 or 3 A's compare answers to check accuracy; have their B's compare their observations to find the best problem-solving practices and report those to the class. Another focus for B's is to find as many variations on the process that still get the right answer. Add another variation you may find useful...

In other words...

In spite of our best efforts to present material in ways that make sense to students, the language of or form of the presentation doesn't “click” with all students—especially if they try to remember it as it was presented, rather than making it their own. However, if students can paraphrase important passages in readings or sections of a lecture, they make it “their own” because the content is represented in their own words. *Directing students to paraphrase significant parts of content can help them understand it and help you know how they understand it.*

Activity
Consider modeling this for students because some believe that paraphrasing is merely repeating; *they need to realize that a paraphrase is a correct rendition of content in a form that sounds like them.*

Assign students a significant chunk of a reading or part of a presentation you've completed and direct them to re-state the content in their own words.

Give them time to think about the content and jot some notes for a paraphrase. Ask students to volunteer their versions. After they have presented the paraphrase (if it has errors) ask the class for “additions or corrections.” Once the paraphrase is correct, move to another segment of the material that you want to sure students have directly engaged and need to “possess.”

Options for use
Create groups of two or three to create a paraphrase together. Another option is to have students create individual paraphrase, and try it out on a partner who is charged with identifying specific differences with the partner's version. Have the pairs “reconcile” the differences. A third variation is to have students write out their corrected paraphrases, and share them via email with the class as a supplement to the text or lecture; or use for test review. How else can paraphrasing be used to facilitate student comprehension or retention of material?

“I remember that...”

Reviews are good for establishing long-term memory. Rehearsal is important in order to build increasingly expanded bodies of information that students can instantly access from memory and use. *Reviews can be quick, loud and fun.*

Activity
For review, (I like to do this with units rather than single chapters) direct students to pair up and designate an “A” and “B.” (15 seconds)

Ask all A's to raise hands so the pairs get roles settled.

Let students know that they are to *draw upon their memory only*—no reading of notes or leafing through the textbook.

Here's how it will go:
1) A's will have one minute to say everything/anything they can remember about the material you are reviewing; B's listen. At then end of one minute, A's stop ;
2) B's have one minute to talk about *new* bits of material they recall and A's listen. At the end of one minute, B's stop and
3) A's have 30 seconds to continue adding new material; at 30 sec. A's stop and
4) B's have 30 seconds to continue adding new material.

At the end, ask students what they know they need you to clarify or reiterate for them.

Options for use
Direct students to list those areas they discovered where their memories are particularly weak. Have them choose the most significant two or three items and take five minutes to go to their notes or textbook and review that material. If you were a student, what variations would work better for you?

Answer tango

As student move toward greater expertise as a result of their education, they need to be able to competently, completely and thoroughly use the concepts of their profession. However, many students struggle with getting the complexity of ideas that may be in their heads on to paper or articulated in presentation. *Students must learn to elaborate discussions of important concepts, ideas, processes and practices central to their professions.*

Activity
Just as a tango line gets more fun as dancers joint it, explanations or answers can get better and more interesting when more people join in elaborating them.

Tell students that the idea of the activity is to develop appropriately elaborate explanations of important concepts, ideas, processes and practices central to their professions.

For example, in accounting, term of "cost" can be quite complicated. However, often students will rely on their common understanding of cost as something like "price." As accounting professionals, they need to understand and be able to explain or use the complex notion of "cost".

If possible, get the students into a circle to increase interaction among them.

To start, ask a student to explain a significant concept (like that of "cost".) that you want make sure they understand. Once she has gone as far as she thinks is sufficient, choose another student to further develop her answer by correcting or adding to it. Keep the process going until you are satisfied that *all* the relevant dimensions of the concept have been stated by the class.

Direct the students to take all that has been submitted by respondents and write as complete an explanation of the concept as possible. Ask two or three (who haven't spoken) to read out their explanations.

Ask students to recall the first explanation of the concept and compare it to the examples just read. *Reinforce the idea that significant concepts in your area of study are complex and that the examples mark movement toward professional competence.*

Options for use
Can you think of ways this exercise may be used in tandem with another activity? This can be used as a review exercise for a major exam. How can you make it more fun? Other ideas?

Fixer-upper

Research over thirty years shows that student attention drops off dramatically after about fifteen minutes of lecture. If students have opportunities to process the content, even for a short period of time, their attention recovers somewhat and they remember more. *Give students a processing task after about fifteen minutes of lecture.*

Activity
This is easy, simple and effective: after about fifteen minutes, stop your presentation, and direct the students to turn to a partner and compare notes for two minutes. Their tasks are to help each other "fix up" their notes by adding details missed; correcting errors, or clarifying notes. After two minutes, continue your presentation.

Options for use
Ask students to compare notes, fix them, and together, create a question they can't answer for each other. Open the class for questions only, deal with each in turn, then continue.

Think of five more variations on the activity:

1.

2.

3.

4.

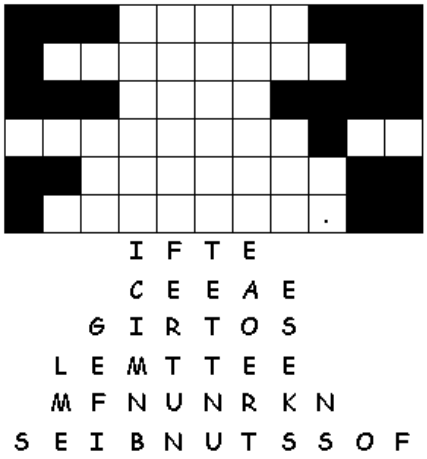
5.

Puzzler

Sometimes, seemingly simple tasks can be quite engaging. Students may read more closely or listen more closely if they have a problem to solve. Try *using puzzles to focus student attention.*

Activity
Create a puzzle featuring significant terms, definitions, etc. I recommend this site:
http://puzzlemaker.discoveryeducation.com/FallenPhraseSetupForm.asp
Select “Classroom resources”; select “Puzzlemaker”

Preface a lesson with the direction that students need listen very carefully for (for example) definitions of terms. Begin your lecture and plan to stop at the end of about fifteen minutes. Pass out the puzzle, and give students some time to solve it; you may direct them to work alone, or with partners. You try doing the puzzle below.
Use the letters below to create a phrase that describes a basic “rule of thumb” for keeping students engaged as you lecture:



I F T E
C E E A E
G I R T O S
L E M T T E E
M F N U N R K N
S E I B N U T S S O F

Options for use
Use as tool to review content. What other uses come to mind?

Break lectures into segments of fifteen minutes

(Answer to puzzle—don’t peek!)

Who, what, when, where, why?

Synthesis (putting things together in a new way) is the highest order of thinking according to Bloom and Krathwohl (Krathwohl 2002). *Using the w.w.w.w.h. model, you can facilitate students attempting to synthesize information so they make it more sensible to themselves.*

Activity
Processes, procedures, as well as histories, and narratives can be summarized, and analyzed using this task.

After you have completed some body of information—a reading (be it a chapter in a construction management textbook, or a poem in a literature class), a lecture, or after viewing a video, ask the students to summarize the material in ONE SENTENCE which treats: Who does what? When? Where? Why? How?

Give the students sufficient time to think, write, re-write. Let them know seemingly simple task is complicated and they should take their time to craft a good sentence.

Have two or three volunteers write their sentences on the board. Direct the class to compare the sentences to determine which is most correct. (I like to give the volunteers opportunity to then make any revisions they wish before the class comments.) Have the class offer “friendly amendments”; sentence authors then may accept or “appreciatively decline” if the author is convinced the sentence is correct.

Options for use
This can be expanded to a short paper assignment. Students can play the role of reporters for their discipline's “newsletter” (Nursing Notes; Engineering Ideas; Management Memos, etc. Have students put together a story on the most important discovery, process, person or figure in the material you are studying and post it by e-mail or LMS to the class.

Some resources

Barkley, E. F. (2010). *Student engagement techniques: A handbook for college faculty.* San Francisco: Jossey-Bass

Bergin, J., Eckstein, J., Manns, M.L., & Sharp, H. (2002). Pattern Language Project. www.pedagogicalpatterns.org/current/activelearning.pdf

Discovery Education
http://puzzlemaker.discoveryeducation.com/FallenPhraseSetupForm.asp

Krathwohl, D. L. 2002). A revision of Bloom's taxonomy: An overview. *Theory into Practice, 41,* 212-264.

Staley. C. (2003). *Fifty ways to leave your lectern.* Belmont, CA: Thomson/Wadsworth Publishing.