Learner-centered Teaching

How to approach a face-to-face class of learners.

Objectives

By the end of the session, participants will:

- Build a mental model of learning and how teaching structures learning

- Discuss and plan to implement evidence-based practices

- Analyze and improve lessons, including writing learning outcomes and writing start-of-class and end-of-class assessments.

- Run a purposeful activity.

How do people learn? Draw or describe your best learning moment.

1 - Learning happens formally and informally, alone, with peers, and with teachers. For "deep," sustained, and detailed, usable learning to happen, we know that context is important. "The new science of learning does not deny that facts are important for thinking and problem solving. Research on expertise in areas such as chess, history, science, and mathematics demonstrate that experts' abilities to think and solve problems depend strongly on a rich body of knowledge about subject matter...However, the research also shows clearly that "usable knowledge" is not the same as a mere list of disconnected facts. Experts' knowledge is

connected and organized around important concepts" ...it is applicable; it supports understanding and transfer (to other contexts)." How People Learn ebook.
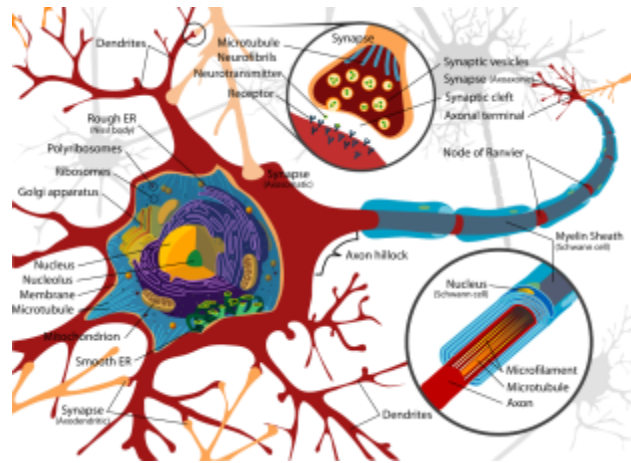
How do you define teaching?

2 - What do these images represent about teaching?

Teaching is less about the teacher than about the learner: about their motivation, their purpose, their engagement, experiences, and questions.

When learning occurs, people connect new learning to existing neural pathways. It is very important to 'hook' learning to existing mental structures. Incorrect learning may take about 7 times to relearn the information (*Signature Pedagogies*). There is also very much an emotional component to learning; for learning that creates stress, the stress can hinder learning rather than promote it. The same with motivation--motivated learners have an easier time, especially if the motivation is internal.

What are the *implications* of these statements?

"Brain myths" are common, cultural beliefs about learning drawn from misconceptions, early science and other sources. Try this brain quiz and test your thinking on what "good learning" looks like.

Complete using your phone. Compare your results with your neighbor and discuss why you think this myth is a myth.

Quick sources of some brain info:

https://www.brainhq.com/brain-resources/brain-facts-myths/brain-mythology

https://www.smithsonianmag.com/science-nature/top-ten-myths-about-the-brain-178357288/

https://www.edutopia.org/article/brain-based-learning-resources

You may want to help your students understand brains and learning!

Learning and the Brain: a National Academies of Science publication
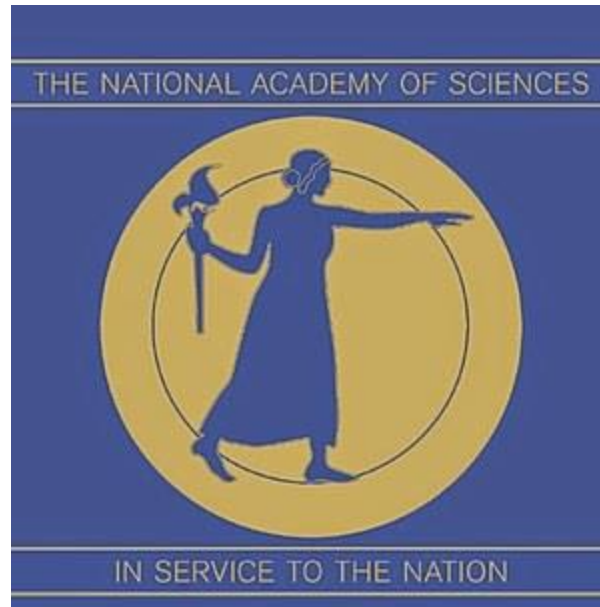
Broad findings:

1. Students come to the classroom with preconceptions about how the world works. If their initial understanding is not engaged, they may fail to grasp the new concepts and information that are taught, or they may learn them for purposes of a test but revert to their preconceptions outside the classroom.

2. To develop competence in an area of inquiry, students must: (a) have a deep foundation of factual knowledge, (b) understand facts and ideas in the context of a conceptual framework, and (c) organize knowledge in ways that facilitate retrieval and application.

3. A "metacognitive" approach to instruction can help students learn to take control of their own learning by defining learning goals and monitoring their progress in achieving them.

*3 - **What might these three findings mean for you as a teacher?***

Effective practice based on evidence:

1. State learning outcomes so that participants understand the purpose and direction of a lesson

2. Share information and model practices

3. Give feedback / receive feedback

4. Use visuals, including mind mapping and organizers

5. Utilize peer learning activities

Match these top 5 to the three general findings above. What finding leads to which practices?

4 - How are learning outcomes written and measured?

Image above links to a youtube video at: https://www.youtube.com/watch?v=eXxTpDg1thI&feature=youtu.be

Case study: Examine the lesson plan and see what elements listed above

1. Today's lesson

2. Lesson on Decision-making

Discussion: time to talk about what's on your mind.

Create the learner-centered lesson, using principles above:

1. Provide a rationale, a purpose, and outcomes

2. Connect to previous learning

3. Encourage student metacognition--their thinking about their thinking--through engagement and reflection

Use the 7E model--elicit, engage, extend, evaluate

Identify
Sequence
in Class
5

1
Analyzing
the Need

EVALUATE
AND
ASSESS

2
Identify
Topic

Identify
Activity
4

3
Identify
Questions

5 - from https://www.nyu.edu/faculty/teaching-and-learning-resources/strategies-for-teaching-with-tech/best-practices-active-learning/steps-to-creating-an-active-learning-environment.html

- Do you need to identify the need and topic? Work to build a learning outcome. See your list of Bloom's verbs or visit: http://bdld.blogspot.com/2014/06/blooms-revised-taxonomy-cognitive.html

- Do you need to develop questions? Use the Critical Thinking.org model to help generate ideas. https://www.criticalthinking.org/ctmodel/logic-model1.htm

- Do you need an activity? Look at active learning lists, such as this one: http://www.queensu.ca/teachingandlearning/modules/active/12_exmples_of_active_learning_activities.html

- Do you need a reflection? Look at the reflection handout or sites such as this: https://www.teachwriting.org/612th/2017/12/28/10-unique-and-creative-reflection-techniques-lessons-for-the-secondary-student

- Do you need an assessment of the learning, that helps you figure out if the lesson was successful? Add a "classroom assessment technique" like an exit slip or "clearest point/muddiest point" question. Consult the handout or visit: https://cft.vanderbilt.edu/guides-sub-pages/cats/

6 - Practice setting up, running, and closing an activity. Work with a partner to sketch out how it will happen.

7 - But there are a lot of resources posted by teachers to help you!

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