Session 02: How People Learn

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Outline

- Questions on the quarter-long activities you need to choose from
- Classroom technology (Classroom Presenter)
- Classroom activities and discussions related to how people learn

Resources

- Teaching Tips
  - pp. 6, 36, 59-60, 140-149 (ch.12), 192, 218-219, 300-316 (ch.23)
- How People Learn
  - Pages 234-238, 244-247 (http://www.nap.edu/openbook/0309070368/html/)
- Mastery: Keys to Success and Long-Term Fulfillment, by George Leonard
- Tools for Teaching, by Barbara Gross Davis
  - Ch.21, 22, 23 (ch.23 is available at http://teaching.berkeley.edu/bgd/motivate.html)
- The Pickup Sticks Model of Teaching, by Alan Shaloway
- Fish is Fish

Classroom Presenter Usage

Hints:
- Do not close the Presenter application – you will lose all slides if you do.
- To submit a response, write it on the slide, obeying the specified format, and then press the “Send” button.

People Learn Best When...

- They see the value / rewards of what they are learning (i.e., they are motivated) or, even better, are inspired or have an urgent need to learn it.
- They feel that they can succeed at what they are trying to learn.
  - This usually goes together with the above point.

Suggestions:
- Frequently revisit the tie between what you’re teaching and the motivation why it is important.
- Be encouraging and give more free reign when you see inspiration.

How People Learn

What do you think?

People learn best when ____________________________

______________________________.
People Learn Best When...

- the learning curve is not too steep and not too mild; what they are learning they already "almost know."
- finding the right balance requires skill from the teacher.
- a "one size fits all" approach would fail on this criterion.
- they see connections between the new knowledge and the existing understanding that they already have. And the gap between the two is not too big as to prevent them from seeing that they could "build a bridge."

Suggestions:
- Approach students personally, not as members of a herd.
- Get early feedback so students are in their understanding and know where to "meet them."

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People Learn Best When...

- they practice (over and over) what is being learned.
- most of it must necessarily be happening outside the classroom.
- they reflect on their practice and adjust it accordingly.
- they receive frequent feedback on what they are doing.
- these are often tied together — Learning = Doing + Reflecting + Receiving feedback

Suggestions:
- Have assignments that give students practice and provide room for reflection (e.g., written) upon what they are doing.
- Give students individual feedback and do it as frequently as practical given the resources you have at hand.

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People Learn Best When...

- their strongest senses are engaged (e.g., visual, auditory, motor).
- different learning styles
- the case against a "one size fits all" approach
- they are responsible for their own learning.
- they don’t have to unlearn something else.

Suggestions:
- Provide alternative forms and formats of explanation in order to match the different learning styles of your students.
- Teach students how to fish, do not give them the fish!
- Provide help by giving directions and rationale, not by providing answers.
- Teach the essentials first, to prevent bad habits from forming.

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How People Learn (cont.)

What do you think?

People respond negatively to learning when

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People Respond Negatively to Learning When...

- pressure is too high (i.e., there is very little time).
- they don’t believe in the value behind what is being learned.
- they believe that the subject or practice detracts them from doing what they want.

Suggestions:
- Allow ample time for the lessons to sink in, but without rewarding laziness.
- Motivate using their terms, not yours.
- Carefully explain why what they are learning will help them be more effective *in the long run*.

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People Respond Negatively to Learning When...

- the subject conflicts with their established ways of thinking.
- the perceived final result of the learning experience is negative.
- this may lead to more than just not learning; it may result in the anti-lesson being reinforced.

Suggestions:
- Consciously introduce situations in which conventional ways of thinking are spectacularly failing. Then, introduce the new knowledge to rescue students from the problematic situation.
- Have students take "baby steps" and emphasize the need for quality at each one.

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Meta Lessons: Teaching Techniques Used

- Think for a minute about the teaching techniques that were used here in class today.

Meta Lessons: Benefits of the Teaching Techniques

- Emphasizing the point that valuable contributions can be made by many, not just by the instructor
  - The instructor acknowledges this by folding student submitted material directly into the lecture.
- Everyone’s opinion can be "heard" without an identity disclosure
  - No raising hands, speaking up, etc.
- The instructor can immediately gauge the level of understanding of the audience.

Meta Lessons: Drawbacks of the Teaching Techniques

- It tends to slow down the pace of the lecture.
- In a discussion, the main point may become muddled unless emphasized the instructor / facilitator.
- If the concept being discussed is well beyond the knowledge of the audience, the quality of contributions may be quite low and/or the audience may feel they have little to contribute without more explicit direction.
- Some students may be (and likely are) predisposed to learning quietly by listening and synthesizing on their own.

Perception of Amount Learned vs. Time

Assume you are learning a new skill. Which of the graphs below roughly represents how your perception of the amount learned evolves with time?