STRUCTURING YOUR CLASS TO MAKE LEARNING STICK

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LEARNING OBJECTIVES

- Identify research-based strategies to help students learn
- Recognize importance of retrieval practice
- Create a plan to (re) structure your course to make learning stick
Take 1-minute to reflect on the following questions (#1 and #2 on handout):
- What is retrieval practice?
- What do you do in your courses to make learning stick?
WHAT IS RETRIEVAL PRACTICE?

- Retrieval practice refers to thinking and recalling something that was learned.
- Retrieval practice is linked to students’ learning, success, and engagement.
- Quizzes, brief writing activities, small group discussions, etc.
WHAT DO COLLEGE STUDENTS DO?

- In some surveys, 80% of college students reported rereading as their number one test-preparation strategy.
- Most researchers agree that rereading and highlighting texts are the least effective learning strategies.
- One professor provided the following meaningful quote: “What I found over the years is, if I don’t do anything before the test, they don’t do anything until the day before the test” (p. 232).
8 RESEARCH-BASED STRATEGIES TO MAKE LEARNING STICK
#8: Activate Students’ Background Knowledge

- Students’ prior knowledge can help learning and “new knowledge ‘sticks’ better when it has prior knowledge to stick to” (Ambrose et al., 2014, p. 15).
  - Background knowledge probes (1st day of class, 1st day of new unit)
  - Pre-test
  - Concept map
  - News report summary
#7: EXPLAIN HOW LEARNING WORKS

- Be transparent and explain rationale behind your teaching approaches
- Cite evidence regarding active learning, collaborative learning, quizzes and retrieval practice, background knowledge probes (Ambrose et al., 2014; Freeman et al., 2014), or other approaches; Prince, 2017)
- Tell students that learning and retrieval practice is hard and that results might not be readily apparent!
#6: INTEGRATE PREDICTION STRATEGIES

- Carey (2014) noted: “predictive activities shape our mental networks by embedding unfamiliar concepts...into questions we at least partially comprehend...Even if the question is not entirely clear and its solution unknown, a guess will in itself begin to link the questions to possible answers. And those networks light up like Christmas lights when we hear the concepts again” (p. 49).
- When students make predictions about course material, they increase their ability to understand and retrieve information later (Lang, 2016)
  - Pre-test
  - 1-minute paper at beginning of each class session
  - 1-minute paper at end of class session
  - Background knowledge and prediction probe
#5: USE LEARNING PARAGRAPHS

- At the end of the week (face-to-face or online), we can ask students to reflect on simple questions:
  - What did you learn this week?
  - How is what you learned this week connected to what you learned earlier in the semester?
  - How is what you learned this week connected to what you have learned in other classes?
  - How is what you learned connected to your life outside of class?
  - How is X related to Y?
  - How will you apply what you learned?
ACTIVE LEARNING BREAK

- Take 1-minute to reflect on the following questions (#2 and #3 on handout):
  - Do you use any of the strategies mentioned? If so, describe the impact.
  - Describe how you would implement one strategy mentioned to improve learning in your courses.
#4: CREATE OPPORTUNITIES FOR ELABORATION AND REFLECTION

- Elaboration refers to finding enhanced layers of meaning in information:
  - 1-minute paper (Encourage students to identify a metaphor or image related to course material)
  - 1-minute paper (encourage students to identify connection between information and their outside life)

- Reflection refers to asking questions about recent learning or other experiences:
  - How is your learning?
  - What went well during the first part of the course?
  - What can you do differently next time?
  - How do you make meaning out of this experience?
#3: PROVIDE OPPORTUNITIES FOR STUDENTS TO PRACTICE WITH FEEDBACK

- **Learning Goals**
  - Be transparent with course learning goals
  - Give students a rubric with feedback
  - Show students what success and target performance looks like

- **Practice**
  - Create opportunities in class for students to practice key skills
  - Consider multiple smaller assignments in lieu of one large assignment

- **Feedback**
  - Provide feedback at the individual and/or group level
  - Use peer feedback
  - Require students to demonstrate how they used your feedback to improve their work
#2: USE SPACED PRACTICE AND INTERLEAVING

- Spaced vs. massed practice
  - Five 10-minute practice sessions vs. one 50-minute practice session
  - Forgetting and strengthening memory
  - Create opportunities for students to practice skills toward learning goals

- Interleaving refers to learning concept A and moving to concept B without fully covering concept A
  - Cumulative quizzes and tests
  - In-class exercises that force students to reflect and make connections with previously covered material
  - Different types of problems and applications
Lang (2016) noted if “you want to retrieve knowledge from your memory, you have to practice retrieving knowledge from your memory” (Lang, 2016, p. 20).

- Low-stakes/cumulative quizzes (10-15% of total grade)
- In-class exercises
- One-minute paper based on previously learned content
- One-minute paper at end of class
- 3-5 minute summary/news report at beginning or end of class
FINAL FOCUS ACTIVITY

- Take **2-minutes** to reflect on the following questions:
  - What did you learn today?
  - How is what you learned today connected to your previous understanding and learning about this topic?
  - How will you apply what you learned?
REFERENCES AND HELPFUL RESOURCES

- Honeycutt, B. (2016). FLIP the first 5 minutes of class: 50 focusing activities to engage your students and create more time for learning. FLIP It Consulting and barbhoneycutt.com, Raleigh, NC.
REFERENCES AND HELPFUL RESOURCES