Mix It Up: The Benefits of Interleaved Practice

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What is interleaved practice?

Interleaved practice is a study technique where learners mix materials or topics within a study session (Dunlosky, 2013; Dunlosky, Rawson, Marsh, Nathan, & Willingham, 2013). Like spaced practice, interleaved practice requires the learner to plan a study schedule ahead of time, and to spread materials across time or study sessions. However, in interleaved practice, the learner's study materials are mixed up, thus requiring the learner to practice different problems or topics across the time of each study session.

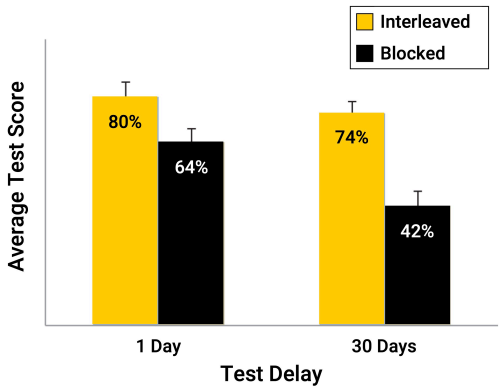
Why is interleaved practice important?

When learners study the same types of materials or problems over time, they are not required to challenge themselves to choose the correct strategy or rules to solving that problem (Dunlosky, 2013). By solving the same problem type over and over again, learners may overestimate their ability to successfully solve a certain problem type or find a solution to a certain topic outside of their limited study context.

By implementing interleaved practice, learners are encouraged to identify, recognize, and differentiate between different problem types or concepts prior to problem solving. Prior research has shown that interleaved practice helps learners distinguish to-be-learned materials that are similar (Rohrer, 2012).

Is there evidence to support this?

Research in several domains have demonstrated the benefits of interleaved practice on learning. In one experiment, researchers found interleaved practice to significantly enhance mathematics learning more than blocked practice (repeatedly solving the same problem type), both immediately after and after a 30 day delay period (Rohrer, Dedrick, & Stershic, 2015).



How can you implement interleaved practice in your course?

Interleaved practice promotes learning and durable memories, especially for disciplines that require learners to solve problems or distinguish between similar concepts. Here are a couple simple ways you can implement interleaved practice in your course structure to promote student success and retention:

1. **Administer cumulative quizzes and exams**. Regular assessments on previous materials or problem types mixed in with current materials or problem types enhance students' memory and recall for that information. For example, in a statistics course, you could assign a quiz that includes a variety of problems to test students knowledge of *t-tests*, *ANOVAs*, and *correlations*, instead of problems that only test one of these concepts.
2. **Implement projects/assignments/activities that integrate topics.** Whether you decide on a short in-class activity, or a semester-long project, design class assignments that encourage students to incorporate several different topics or concepts from your course. For example, in a language acquisition course, you might create a prompt that encourages students to write a story that mixes old and new nouns and verbs they've learned in the course.

Why Transparency is Critical:

Interleaved practice pushes learners to identify and retrieve information about concepts each time they are presented with a new problem or question. Therefore, students are unable to rely on a rhythm of using the same strategies each time. While this challenge may discourage students, it is helpful to communicate the learning benefits involved when using this learning technique. Be transparent with your students and discuss the reasoning underlying your choices in assignment and assessment design.

References

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