

# Teaching: Successive Relearning / Thriving After Psychopathology

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[Study, Recall, Repeat: The Benefits of Successive Relearning • Who Thrives After Experiencing Psychopathology?](#)

Aimed at integrating cutting-edge psychological science into the classroom, Teaching *Current Directions in Psychological Science* offers advice and how-to guidance about teaching a particular area of research or topic in psychological science that has been the focus of an article in the APS journal [Current Directions in Psychological Science](#).

## [Study, Recall, Repeat: The Benefits of Successive Relearning](#)

By Cindi May (College of Charleston) and Michael Scullin (Baylor University)

[Rawson, K. A., & Dunlosky, J. \(2022\). Successive relearning: An underexplored but potent technique for obtaining and maintaining knowledge. \*Current Directions in Psychological Science\*, 31\(4\), 362–368.](#)

## What We Know About Successive Learning in the Lab and in Life

Successive relearning is a study strategy that combines two powerful techniques known to boost retention: [retrieval practice](#) (the “testing effect”) and [spaced practice](#). Across more than a dozen studies, successive relearning boosted mastery of foreign-language vocabulary, definitions for terminology in psychology and statistics courses, and probability concepts (e.g., Bahrick, 1979; Rawson & Dunlosky, 2011; Rawson et al., 2020). Moreover, the advantages of successive relearning are evident in both laboratory tests (e.g., Rawson & Dunlosky, 2011) and performance on in-class exams (e.g., Rawson et al., 2013), and even a single relearning session can be sufficient to significantly elevate recall (Rawson et al., 2018).

### Student Activity

#### Bring successive relearning to life in the classroom

Ask your students whether they have ever learned a TikTok dance, executed a hocus-pocus move in soccer, or mastered a new piece of music on an instrument. Have them discuss how they succeeded. Chances are, they practiced repeatedly until they perfected their skill—and then continued to rehearse intermittently to keep the skill sharp. This approach—which involves successive relearning—can, and arguably should, be applied to learning in the classroom.

Unfortunately, strategies used in the classroom often differ. Many students read about a concept in their textbook (or hear about it in class) a single time, and then review the information a day or two before the test. To demonstrate the benefits of successive relearning over this read–review, “business as usual” approach, try the following demonstration.

At the start of a new unit, use [this successive relearning template](#) to create a set of flashcards that features some (but not all) of the concepts from the unit. Share the set of flashcards with your students, and give them the following instructions:

*Before our next class, review these flashcards and learn the terms and definitions. Practice until you can recall each definition accurately when cued with the term three different times. Record how long it takes you to complete this exercise.*

Repeat these instructions during each class until the end of the unit, with one change: After the initial learning, students need recall each definition accurately only once during a given practice session. They should record how long it takes them to complete each session. Students should then engage in at least three relearning sessions after the initial learning.

When you create your unit exam, be sure to include questions on each of the practiced concepts as well as non-practiced concepts. When you return the graded exam to students, have them compare their performance on the practiced concepts to their performance on non-practiced concepts that they learned on their own. Odds are that their performance on the practiced concepts will be higher. In addition, ask students to review how long it took them to recall the concepts on their successive learning attempts. They should find that their recall was faster each time.

The benefits of successive relearning are meaningful, and they persist. Students in a psychology course learned some of the course material using successive relearning and were directed to learn the rest of the material on their own. At test, students scored 10% higher (a full letter grade) on material learned using successive relearning relative to material they studied on their own, suggesting that they either devoted less time or were less effective with their time when studying concepts on their own. Nearly a month later, the successive-relearning advantage was even greater—scores were 40% higher than scores for material students learned on their own (Rawson et al., 2013). Assuming students are sufficiently compelled by these findings (and by the Student Activity) to consider adopting this strategy, it will be helpful to review some pertinent key findings.

### **What are the essential steps for successive relearning to be effective?**

? During initial learning and practice, students should recall the material, not merely read or review it (e.g., Rawson et al., 2013). They should accurately recall each item in each session.

? Students must engage in multiple relearning sessions. Depending on the timing of assessment, three relearning sessions may be sufficient for maximal benefits (Rawson & Dunlosky, 2011).

? Relearning sessions must be spaced apart. In one study, when students recalled items correctly once in each of three spaced sessions, they recalled more than twice as much as when they correctly recalled each item three times in a single session (Rawson et al., 2018).

### **What are the limitations?**

? Although the time needed to successfully recall concepts generally diminishes across successive relearning of the same material (Rawson & Dunlosky, 2011), the process does take time—and students may find it cumbersome.

? Current research does not allow a strong understanding of how many sessions are needed across different learning contexts. Some work suggests that three relearning sessions may be sufficient for optimal benefits, but that could vary depending on the interval between learning and test.

? The vast majority of extant studies have tested the efficacy of successive relearning with undergraduate college students. There is some evidence that it is effective with middle schoolers (Dunlosky et al., in press) and adults with aphasia (Schuchard et al., 2020). But more work is needed to understand the efficacy of successive relearning for different age groups.

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## **Who Thrives After Experiencing Psychopathology?**

*By C. Nathan DeWall, University of Kentucky*

[Rottenberg, J., & Kashdan, T. B. \(2022\). Well-being after psychopathology: A transformational research agenda. \*Current Directions in Psychological Science\*, 31\(3\), 280–287.](#)

### **Student Activity**

#### **Psychological thriving: Nine ingredients**

Ask your students to complete this exercise.

Answer the following questions using the provided scales. Only participate in the discussion if you're comfortable doing so.

1. \_\_\_\_ How would you rate your health these days? 0= *the worst possible health* to 10= *the best possible health*
2. \_\_\_\_ How much of the time did you feel hopeless over the past 30 days? 1= *all of the time* to 5= *none of the time*
3. \_\_\_\_ How much of the time did you feel cheerful over the past 30 days? 1= *all of the time* to 5= *none of the time*

4. \_\_\_\_ I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people. 1= *strongly agree* to 7= *strongly disagree*
5. \_\_\_\_ I am quite good at managing the many responsibilities of my daily life. 1= *strongly agree* to 7= *strongly disagree*
6. \_\_\_\_ I think it is important to have new experiences that challenge how you think about yourself and the world. 1= *strongly agree* to 7= *strongly disagree*
7. \_\_\_\_ I know that I can trust my friends, and they know they can trust me. 1= *strongly agree* to 7= *strongly disagree*
8. \_\_\_\_ I have a sense of direction and purpose in life. 1= *strongly agree* to 7= *strongly disagree*
9. \_\_\_\_ In general, I feel confident and positive about myself. 1= *strongly agree* to 7= *strongly disagree*

Ask students to score their responses using the following key:

- Reverse-score questions #3–9: 1 = 7, 2 = 6, 3 = 5, 4 = 4, 5 = 3, 6 = 2, 7 = 1
- Add all responses to create your Psychological Thriving score. Higher scores indicate more psychological thriving.

Instructors can tell students that these are example questions from a longer questionnaire related to nine features of psychological thriving (life satisfaction, negative affect, positive affect, autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance; Rottenberg et al., 2019). Ask your students to try to guess which psychological thriving feature each question measured. Give students two minutes to look at the items and jot down their guesses. Tell them the correct answers are the features in the list provided above.

Ask students to identify their highest- and lowest-scoring psychological thriving features. Do these scores surprise students? Why do they think scoring highly on these nine ingredients of psychological thriving can help identify those people with depression who will be flourishing 10 years later? If they know people who have had depression, have they seen them benefit from any of the nine ingredients? If so, which ones helped these people the most?

Flip a coin, call heads or tails, and the result will show your lifetime odds of having a mental disorder. You might live with major depressive disorder, generalized anxiety, schizophrenia, or panic disorder, among many other conditions. Because half of the population will experience a mental disorder (Kessler et al., 2005), it behooves psychologists to know more than how to relieve symptoms among people with mental disorders. To gain a comprehensive perspective, according to Jonathan Rottenberg and Todd Kashdan (2022), psychologists might also strive to understand why people thrive after experiencing psychopathology.



Rottenberg and Kashdan shine a light on what [positive psychologists](#) have identified as one of psychology's biggest blind spots (Seligman & Csikszentmihalyi, 2000). For decades, clinical psychologists' study of the human mind was almost synonymous with how to reduce human suffering. From psychodynamic therapy to cognitive behavioral therapy to pharmacological treatment, psychologists devoted their efforts to alleviating misery. Cognitive behavioral therapy, for example, attempts to modify depressed people's thinking so that they dwell less on feeling hopeless. It does not equip depressed people with cognitive strategies to increase their happiness. Being laser-focused on reducing mental anguish blinded psychologists to what may cause psychological wellness and who thrives after experiencing psychopathology.

[Learn more about thriving after therapy in this feature from the 2022 July/August issue of the Observer.](#)

Few studies have examined whether people with mental disorders later experience psychological wellness. To fill this gap, Rottenberg, Kashdan, and their colleagues analyzed a nationally representative sample of people who had a history of a mental disorder, were fully recovered from the disorder (zero or minimal symptoms for at least six months), and showed high levels of psychological functioning along nine different features (see Student Activity for more discussion on the features). About 10% of people who initially experienced major depressive disorder were thriving a decade later, with their psychological well-being surpassing that of three-quarters of their nondepressed peers (Rottenberg et al., 2019). Similar results occurred in a sample of U.S. youths who had attempted suicide, with one in seven psychologically thriving 7 years later (Tong et al., 2021).

Far from being rare, mental disorders are widespread. And although some disorders linger, others are fleeting. Psychologists have done a solid job finding ways to reduce human suffering. But they have come up short in showing how often people who once suffered from a mental disorder later experience a life filled with happiness, meaning, and autonomy. There's more to life than not being miserable. Thriving is pretty good, too.

**Feedback on this article? Email [apsobserver@psychologicalscience.org](mailto:apsobserver@psychologicalscience.org) or login to comment.**

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