

The Spaced Interval Repetition Technique

What is it?

The Spaced Interval Repetition (SIR) technique is a memorization technique largely developed in the 1960's and is a *phenomenal* way of learning information very efficiently that almost nobody knows about. It is based on the landmark research in memory conducted by famous psychologist, Hermann Ebbinghaus in the late 19th century. Ebbinghaus discovered that when we learn new information, we actually forget it very quickly (within a matter of minutes and hours) and the more time that passes, the more likely we are to forget it (unless it is presented to us again). This is why "cramming" for the test does not allow you to learn/remember *everything* for the test (and why you don't remember *any of it* a week later). SIR software, notably first developed by Piotr A. Woźniak is available to help you learn information like a superhero and even retain it for the rest of your life. The SIR technique can be applied to any kind of learning, but arguably works best when learning *discrete* pieces of information like dates, definitions, vocabulary, formulas, etc.



Why does it work?

Memory is a fickle creature. For most people, to *really* learn something, we need to *rehearse* it several times; this is how information gets from short-term memory to long-term memory. Research tells us that the *best time* to rehearse something (like those formulas for your statistics class) is right before you are about to forget it. Obviously, it is very difficult for us to know when we are about to forget an important piece of information. With SIR software, like Supermemo and Mnemosyne, the *software learns* how quickly you forget information and strategically re-presents it to you at just the right time for you to efficiently drill and practice what you are learning.

How does it work?

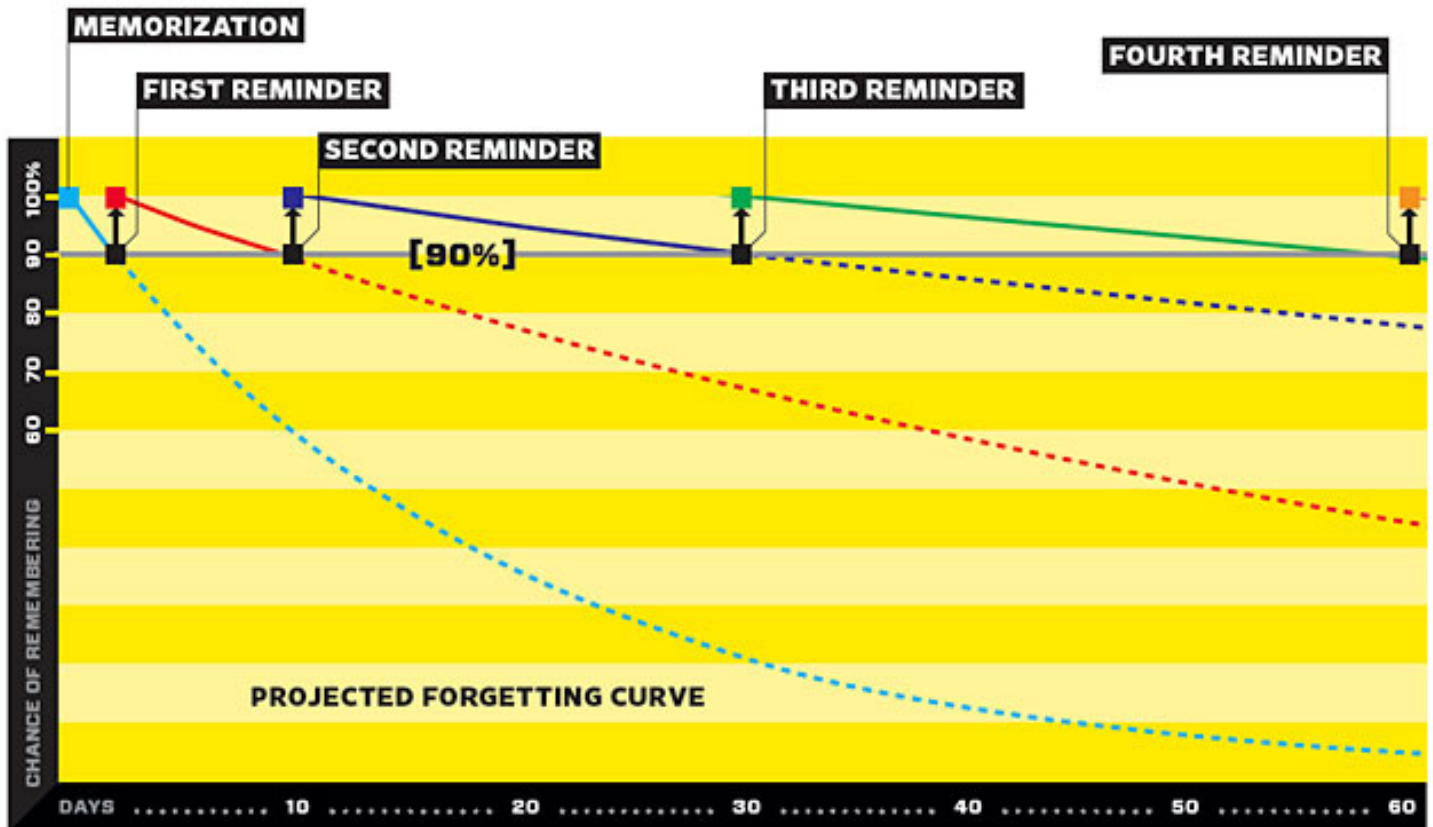
Basically, SIR software is like a sophisticated set of computerized flashcards. The special advantage is that when you use the flashcards, you grade yourself on the recall of the information (e.g., on a scale of 1 to 5). When you tell the software how well you remembered each piece of information, it builds a profile of how you learn and retain information. For cards that you recall very poorly (and give yourself a poor grade on), the software will re-present them the next day; for cards that you recall very well (and give yourself a good grade on), the software will wait (e.g., for a week or two) before it shows you that card again. The more you practice, the more the software "learns how you forget" and knows when to strategically drill you on specific cards. When you are first building up your set of electronic flashcards, you will spend some serious time using the software. But, if you use it to drill a little bit everyday, you will see tons of information get into your long term memory with relatively little effort. Just be forewarned, SIR software will break your cramming habits, and you just might like to study!

Resources:

- One of the most favored programs out there is Supermemo. It has a good tutorial built into the program and also allows you to cut and paste pictures, urls, and videos into your flashcards. You will also find a lot of good information about how spaced interval repetition works when you browse the website. It is not free, but has more features than most of the free SIR software. It can be purchased at www.supermemo.com.
- Mnemosyne is a good free-ware version of SIR. It is not as versatile, but very functional: <http://www.mnemosyne-proj.org/>.
- Please email Dr. Jonathan Thomas-Stagg at jstagg@illinois.edu if you have any questions!

Change that habit!

The best way to change your academic habits for long-term success is to invest time and energy into practicing strategies like the Spaced Interval Repetition technique. It may not work great right away, but the effort you put in to practicing better academic habits is directly proportional to the success you will experience. Coaching at DRES can help you change your habits. To start coaching, please contact Dr. Jonathan Thomas-Stagg at jstagg@illinois.edu. Thanks!



This picture demonstrates how SIR software works. Along the bottom are the number of days that pass, and along the side shows the percent chance that you will remember a piece of information. Notice that the first time you “memorize” information, it tends to decay quickly over time (see how the first dotted line – or “forgetting curve” dips down dramatically over time?).

SIR software will re-present a flashcard when it predicts that there is only a 90% chance that you will remember the information on it. When it shows you the flashcard a second, third, and fourth time, your “forgetting curve” will not drop the way it did after the first time you learned the information. The information is effectively getting stored into long-term memory. If you use the software regularly, you will easily remember 90%-plus of the information you are learning without having to heroically relearn everything right before the final. Plus, you will remember the information in other, more advanced courses where you are expected to retain the information from pre-requisite courses.

Read about Piotr A. Woźniak and his amazing software development in Wired magazine’s excellent article:

Want to Remember Everything You'll Ever Learn? Surrender to This Algorithm

http://www.wired.com/medtech/health/magazine/16-05/ff_wozniak

“SuperMemo is based on the insight that there is an ideal moment to practice what you've learned. Practice too soon and you waste your time. Practice too late and you've forgotten the material and have to relearn it. The right time to practice is just at the moment you're about to forget. Unfortunately, this moment is different for every person and each bit of information. Imagine a pile of thousands of flash cards. Somewhere in this pile are the ones you should be practicing right now. Which are they?”

