

Advice: How to Find the Holes in your Knowledge and Live to Tell the Tale

It feels good to know something and be right, and it usually doesn't feel good to be confused, lost, out of control, or ignorant. It can be a temptation to pretend to know, just so we can feel better about ourselves. But pretending that we know what's going on when we really don't is living a lie; it's denial. And worse, it usually comes to light that we were just kidding ourselves... and that's pretty embarrassing, too.

So the million dollar question is:

How can I become comfortable with what I don't know?

Sadly, there's no single answer. Life is uncomfortable sometimes, and that's how it is. But there are some things you can do or tell yourself that help:

1. You can't learn anything until you admit that you don't know it. Saying "I don't know" is important.
2. Don't say "next time it will be better" until you've committed yourself to doing something differently the next time. (One person suggested that the definition of insanity is "doing the same thing over and over, expecting each time to get a different result".)
3. Slow down. A relaxed mind can absorb and retain information better than a stressed or rushed one. A relaxed mind can also cope with discomfort more than a distracted mind.
4. Practice and check your answers. If you don't get the problem exactly right, look back at your work and see if you can find the mistake. If you can't find the mistake, ask a friend or the teacher. Don't let it slip past, especially if it's a lower-numbered problem.
5. Do a problem by every method you can think of and compare the methods. Which method took more work? Which method was quicker? If there were two methods that worked equally well, which did you like better, or which did you complete more quickly? These types of information will often help you to understand more complicated problems.
6. When you make a mistake, label it in words: "quadratic equation, not linear, so set it equal to zero instead of isolating the variable". Use words to make your knowledge more specific. Try to write words to describe what you did wrong, and what you should have done.
7. Try to explain it to someone else. This might be someone who doesn't get it yet, or someone who does. Either way, you'll get feedback on whether you make sense.
8. Talk your way through it. Imagine the voice of a knowledgeable person telling you each step.
9. Write down every step of your work for the first few problems of a new type; label it with words describing what you did and why. Then when you're studying or you make mistakes later, you can compare.
10. Take class notes on half the sheet of paper and leave the other half blank. After class, go through and add extra explanations, or do the examples again by yourself, or compare your notes to a friend's notes. If your notes don't make sense, write down your questions and ask someone as soon as possible.

Remember that Hank Aaron got the record for most homeruns by also getting the record for most times striking out at bat.

Failure isn't falling down, it's staying down.