

Learning on Steroids:

The 5-Year Old Pupil Method



by Scott Young

The 5-Year Old Pupil Method

If you had to explain your subject to a 5-year old, how would you do it?



Photo by MckaySavage

That is the essence of this tactic. It sounds simple, yet I'm devoting an implementation guide to it, because it's incredibly powerful.

Why a 5-Year Old?

The age of your imaginary pupil isn't important. Instead this tactic is forcing you to do two crucial things you might not otherwise do in the course of your studies:

1. Explain the concept to yourself.
2. Reduce the concept to simpler components.

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By explaining you increase understanding. If you “know” an idea, but can’t articulate it, then you don’t know it very well. If you claim to understand calculus, but can’t explain how it's done to another person, then its likely that your own thinking on calculus is disorganized.

The 5-Year Old Rule comes in handy during the debug phase of holistic learning for this very reason. It exposes you to your weaknesses in understanding. Unfortunately, too many people wait until a test date or real situation before they find these weaknesses.

Reducing the abstract to simpler components is another virtue of this tactic. When you deal with highly abstract ideas you barely understand, its like trying to play a guitar with ten foot

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poles fastened to your wrists. No matter your dexterity, you can't really play the guitar well because you're ten feet away from what you're using.

This rule helps you cut off the poles and bring difficult subjects down to a common ground.

Explaining quantum theory to a 5-year old would be almost impossible. The point isn't to make complicated subjects stupid, but to bring them down to a level where they appear obvious.

Don't Be Afraid to Talk to Yourself

Too many people get stuck in the role of learner. They feel that the learner/teacher interaction is a fixed relationship. Instead

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the learner often becomes the teacher and the teacher often becomes the learner. It's a cycle.

You need to be comfortable switching from learning a subject, to explaining it to yourself (or others). When you switch into teaching mode, that forces you to take ideas you understand and make them clear and organized.

Write to yourself if talking to yourself feels a little to crazy. Both force you to articulate what you know in a clear manner.

Explain it to Your Friends

Do you know a smart person in your class that is always being asked questions by others? Maybe you're that person.

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I want you to consider a hypothetical possibility: that the person isn't asked questions because she is smart. Rather, she is smart because other people ask her questions.

Obviously some initial talent and rapid learning skill plays a role, but I've found that by being the explainer, I often end up better organizing my own learning. When I'm asked to explain how to solve a problem to someone, I'm forced to articulate what I know.

Group Practice

If you're a sociable person and like to study in a group, try this exercise: everyone has to partner up and explain the concepts to their partner. Then the roles switch and the partner has to explain a different idea.

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Is any new learning taking place here? Strictly speaking, there is no new information being generated. When you explain an idea to another person, you're just repeating what you've learned.

However, your organizing that information, linking it to ideas you hadn't considered before. Consider explanation as a primary tool for pruning your mental shrubbery.

Using Explanations to Test Yourself Early

Many rapid learning techniques lack safety precautions. When you use a metaphor, your understanding increases, undoubtedly. But if the metaphor was incorrect or just not useful, you have no way of knowing until a testing situation. When these techniques break down, they simply fall apart without warning.

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The 5-Year Old Pupil Method succeeds because it does have a safety valve. When you start articulating ideas you've learned, it will immediately become obvious if you don't understand your subject.

If you have to refer to the material constantly when trying to explain, you don't know it well enough yet.

If you make errors in your explanation that lead to incorrect results, you don't know it well enough yet.

If you get stuck, confused, when you're trying to explain, you don't know it well enough.

That's why I suggest doing some form of this technique even if you rely on other rapid learning strategies more frequently.

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Because it will quickly let you know whether you're on track or struggling.

Examples of the 5-Year Old Method

I'm going to offer some examples of the tactic, because even simple ideas can often be tricky to implement in reality. I'll offer two ways I've used this method in the past and then a final, hypothetical example, that reinforces the idea.

Example One: Understanding Math by Volunteer Tutoring

One step that greatly increased my understanding during a statistics course had nothing to do with studying. Instead, I had a number of friends taking the class at the same time, and when they got stuck on assignments, I would lend a helping hand.

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There were two points I really took away after this experience:

First, you can think you know something without knowing it deeply. False confidence is a danger and it is one of the reasons I still devote review time before exams, even to subjects I “get”.

When helping other people, I would sometimes trip up in my explanations, start explaining how a particular formula works and then switching, “wait, no... that’s backwards, it’s the opposite.” Explanations to other people (even if they aren’t 5-year olds) helped me illustrate which concepts I didn’t understand fully.

Second, even if you do understand a concept, explanation forces you to understand it more deeply. I had no problem with confidence intervals in statistics, but after explaining how it works

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a half dozen times, I picked up new tricks that made it even easier. When you simplify, you often discover links and connections you hadn't stumbled upon before.

Example Two: Understanding Accounting by Explaining to Myself

Explaining to yourself can help with ideas that seem simple, but can become confusing when you actually try to apply it. Discrepancy analysis was one of those simple-yet-tricky topics I had to learn in an accounting class.

For the non-accounting majors, discrepancy analysis is basically answering the question: why are two sets of results different. Was the price different? Quantity sold? Favoring a less profitable product over a more profitable version?

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The equations aren't too difficult, but in a complex question, it can still be easy to screw these up. My response was to walk myself through the equations and the process to such a simplified extent that it seemed obvious.

So instead of rushing immediately to understanding a discrepancy based on mix or currency (arguably less obvious), I made sure I really understood the more obvious price discrepancy. I explained it to myself by creating fictional examples with my own business, explaining it in as much detail as possible so that I felt a much stupider version of myself could still understand.

After that I worked up to the more difficult discrepancy analysis, building on the past examples I had created.

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In the end the exercise only takes about fifteen or twenty minutes, but it helped me understand the subject (and flagged areas I didn't understand) immediately.

Example Three: Understanding Philosophy

As a third, hypothetical example, let's say you need to understand Immanuel Kant's moral philosophy for a test.

The first step is, obviously, to attend the lectures on the topic and read the notes provided. But, even after the basic steps, you might still feel a bit behind. How could you use the 5-year old method to increase your understanding of Kant?

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Start with the ideas you already feel that you understand very well. So, maybe you don't understand Kant's principle of universality, but you get the gist of his categorical imperative. The first step would be to explain to yourself, in as much simplicity as possible, the ideas within the categorical imperative.

The way to use the method is always to reinforce the foundation before scaling up more difficult topics.

The next step could be to tackle one of the simpler examples of Kant's principle. You might take the example of lying, and explain in detail how Kant views this as immoral because if lying were taken to a universal extreme, it would contradict the role of language in communicating truth.

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If you get stuck on an example or you can't explain something fully, re-read the material, speak to someone else about it and try again. It might take a bit more work to really "get" a subject, but once you make gains they are rarely lost as those explanations tend to stick.

Implementation Steps

Admittedly, this is a pretty simple technique. However, just because it's a simple idea doesn't make it any less powerful.

The best way I can suggest to apply this is to keep a study journal. This is a computer (or paper) document which accompanies every subject you have. After you complete a class or required reading, explain to yourself, in your own words, what you've learned.

The goal should be to make the explanation simple enough that someone who hadn't read what you have would understand the subject. Bonus points if you could actually teach it to a 5-year old you know.

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For implementing this technique, I recommend keeping a study journal for your classes, every day for 30 days. By making it a 30-Day Trial, you'll get used to the practice of keeping a self-explanation journal and it will be easier to have the subjects stick in your mind.

Another suggestion is to simply leave a margin in your notes where you can rephrase key ideas in your own words. This articulation of the ideas will help you organize them.

The best solution is to get a novice, someone who doesn't understand the subject, and try to teach them. Teaching requires knowing, so the best way to learn is often to teach.