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The TRUTH About Learning to Code

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https://medium.com/@tuomas.kivioja/coding-is-hard-the-truth-about-learning-to-code-31713e06d088

Let's face it. Learning how to code is really hard. And being good at coding is even harder.

This fact understandably discourages many people. Whenever I recommend to people that they should start learning how to code because it's such an amazing and useful skill to have, the objection that I always hear is along the lines of:

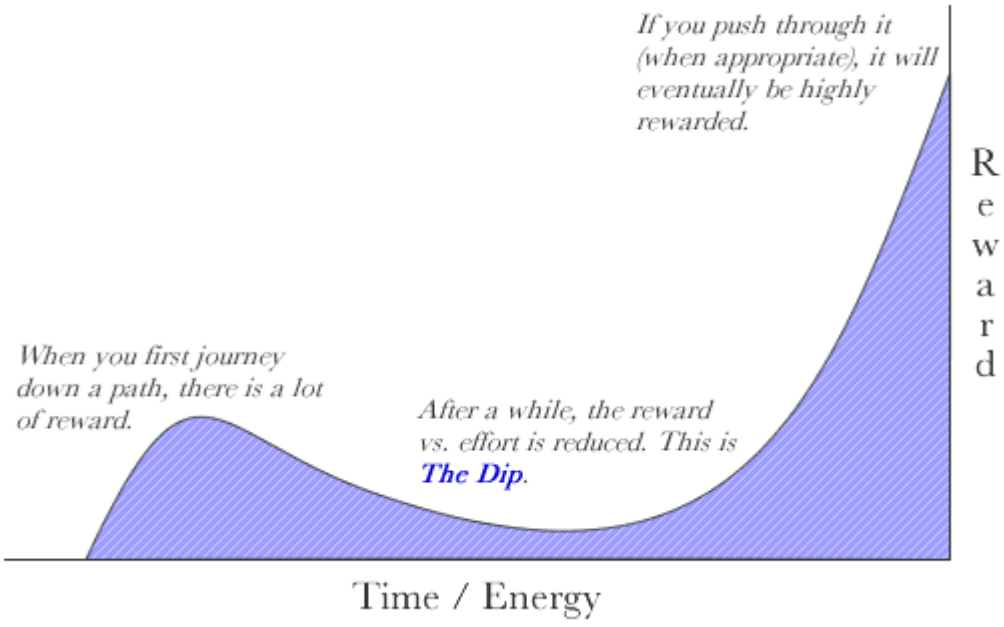
"but it's so hard, but I can't do it, but you need to think and be mathsy and all..."

So most people don't end up trying. And the ones who do end up quitting when it gets hard. But the case that I'm going to make in this article is that **yes, coding is very hard. But that is *precisely* why you need to learn it.**

And I'm going to explain what I mean using a simple graph & some basic economics!

The Learning Process

The graph we are going to be using is from a book called *The Dip* by Seth Godin. It neatly describes how your motivation & how 'rewarding' your learning process feels as a function of time. It looks like this:



Reward from learning as a function of time

Step 1: The Early Excitement

On the y-axis, we have the subjective feeling of 'reward' from learning a new skill, and on the x-axis, we have time since we start.

And to explain what is going on here, the way it usually works is that when you start off learning something new your motivation is very high because you're very excited about the fact that you're being introduced to this new exciting world and all the new things that you've never even heard about. You start learning the basics and you're very motivated in the beginning because you have your big end goals in mind that still seems very attainable.

You are learning a lot because at the beginning the learning curve is steep. Depending on what you have chosen to learn, you may even be learning a whole new way of thinking, as you do with programming, which is very exciting.

You "*don't know what you don't know"* yet which makes you oblivious to how long the path ahead actually is. This is the beginning part of the curve.

Step 2: The Dip

But then things get hard. Suddenly, your motivation drops. You hit what's called 'the dip'. When you're in 'the dip', you no longer feel as excited as you did in the beginning. You start doubting if what you're doing is even worth it, and you start realizing that what you're doing is in fact very hard. You get to the point where you start to see just how far away your goals still are, and because of this, you may end up deciding that all this is actually not worth the effort after all.

This is where most people quit. Most people cannot get past this hump of low motivation and they end up quitting because it gets too hard to keep going without that early juice of motivation. Maybe you should just spend your previous learning time going to the pub with your friends instead..

You now *"know what you don't know",* ie you begin to understand just how difficult it will be to become an expert. This is the 'dip', or middle part of the curve. However, big rewards await those who can climb up from the dip...

Step 3: Getting over the struggle

Not many people manage to traverse the long climb up from the dip. But for those who do, their motivation starts to go up again, and eventually you reach a baseline level of motivation where you're now used to doing what you do, and you finally start to get at least somewhat good at it. Hence it becomes more natural to keep going. As you get better and better, your feeling of reward may even keep climbing up as we humans generally enjoy doing things we're good at.

This is the last third of the curve. If you make it here, congratulations! You can now keep getting better with much less resistance, having successfully shaken off 90% of the competition who were left behind in the dark depths of the dip.

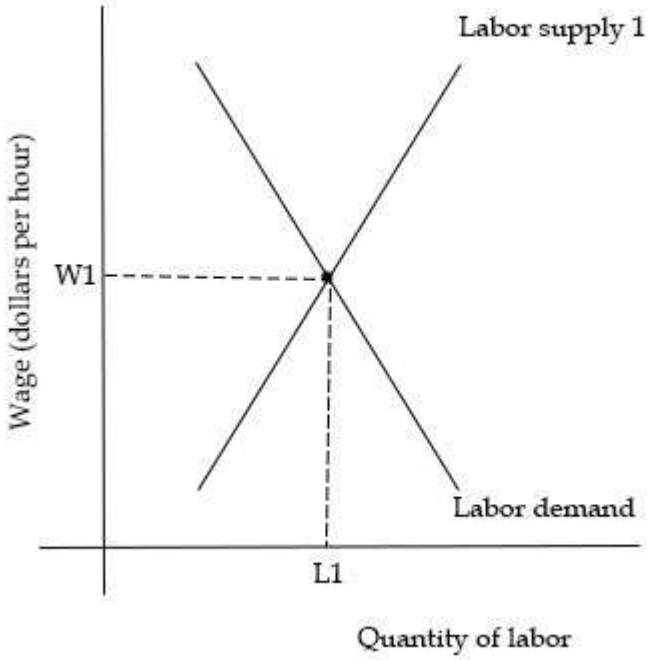
If you get over the dip, you will now **have something that most people don't**. You will have learned to code, or whatever else you're trying to learn, and you're at a point where most people haven't reached. You will have a **relatively scarce skill** that most people didn't have the tenacity to learn.

This gives you bragging rights on its own, but to realize exactly why this is so important, we're going to be borrowing an idea from basic economics. (I did an economics degree in university, most of which was useless, but at least this is a chance for me to pretend I actually learned something)

Why you should learn to code — Explained using Basic Economics

The world generally works based on supply and demand. And when deciding which career to go after, a good policy is to determine which career has the **highest demand** with the **lowest relative supply.**

What does this mean?



Supply and demand must meet

Look for High Demand

it's useful to be wanted

High demand for a certain skill means that in general companies need a lot of that skill. In other words, the skill is extremely valuable for companies to make them more money. Luckily for us, coding is one of the skills with the highest demand in the world.

According to the U.S. Bureau of Labor Statistics, between 2020 to 2030, employment for software engineers **is projected to rise by 22%"**, which is faster than the average projected rate of growth for all occupations (5%). (Source)

The reason for this is that in this day and age, most new products and services involve technology, which requires competent software engineers to code them.

So the “demand curve”, as economists would say, is extremely high, ie for any given level of salary, there is high demand for workers in the technology sector.

Seek to be in Low Supply

On the other side of the equation, we get back to the fact that it’s difficult to get good at coding. As we established, this leads to many people being unsuccessful at learning to code. But if you are one of the people who do succeed, the fact that coding is hard is actually a **good thing**.

Because coding is hard, most people won’t bother or don’t succeed in learning it, which means that there is a **relatively low supply** of coders compared to the counterfactual reality where coding is easy.

And the laws of economics state that the less supply there is, ie the **less competition** there is of competent software engineers, the better it is for those who are competent software engineers. Low supply leads to a relatively low number of available workers at any given level of salary. Hence, to meet the high demand for software engineers, **companies are forced to pay more** to induce the exceedingly scarce breed of coders to come work for them instead of their competition.

So you hopefully start to see how the fact that coding is hard is precisely why you should learn it because it means that there will be less competition for your skills. And when we pair this with the fact that your coding skills are in extremely high demand, you will be in a **very good negotiating position** when discussing salaries, perks, holidays and what have you.

You may already know that 2022 is a very good time to be a programmer. And now you know why.

Do what others can’t

This is a general fact. Whenever something is hard it means that most people *by definition* won’t be able to do it which means that *by definition* there is less competition for the jobs that require those skills. Luckily for us, coding is one of these kinds of skills and software engineering is one of the few industries in the world with this ridiculously high demand but relatively low supply.

If you know how to code you will have a skill that’s extremely valuable that most people don’t have and you can leverage it to get a very lucrative career for yourself that also has excellent work-life balance & perks (in most companies). Better yet, after just a few years of experience, you’ll never be short of opportunities because the demand for *experienced* software engineers who are *good* is so exceedingly high that companies will be begging for you to work for them, not the other way around.

So coding is hard and **that is precisely why you need to learn it** because in order to succeed in life **you need to know how to do things that most people don’t know how to do.**

Thanks for reading. I write about my journey of learning Coding & Computer Scienceas well as life as a Software Engineer & Youtuber. If that interests you, make sure to drop me a follow :)

For more from me, check out my Youtube channel, Internet Made Coder. My channel documents my life as a Self-Taught Software Engineer as well as my journey self-teaching Computer Science & Programming.