

*“Errors are the basis for neuroplasticity and learning. The feedback of these errors, the reaching to the wrong location, starts to release a number of things. This includes epinephrin that increases alertness and acetylcholine that increases focus. This is why frustration that leads us to quit and walk away is the absolute worst thing. Because is acetylcholine is released it creates an opportunity to focus on the error margin (the distance between what it is you’re doing and what it is you would like to do), and then the nervous system starts to make changes almost immediately in order to try to get the behavior right. And when you start getting it even a little bit right, that third molecule is released, which is dopamine, which allows for the plastic changes to occur very fast.*

*Errors and making errors out of sync with what we would like to do is how our nervous system is cued that something isn’t going right, and signal the neural circuits that they have to change.*

*If you are uncomfortable making errors and you get frustrated easily, and if you leverage that frustration toward drilling deeper into the endeavor, you are setting yourself up for a terrific set of plasticity mechanisms to engage. But if you take that frustration and you walk away from the endeavor, you are essentially setting up plasticity to rewire you according to what happens afterwards, which is generally feeling pretty miserable. So now you can appreciate why it is that continuing to drill into a process to the point of frustration, but then staying with that process for a little bit longer (to the point of starting to approximate the correct behavior just a little bit), is the most important thing for learning.”*

Dr. Andrew Huberman, neuroscientist, Stanford School of  
Medicine. <https://www.youtube.com/watch?v=hx3U64IXFOY&t=1831s>