


Learning Effectively:

Zooming In and Out


The Bigger Picture



- Your goal is to architect and build systems
 - Think about the data flow through your entire system
- Nothing exists in isolation
 - Services interconnect
 - Your system interacts with other systems
- Change over time is a key dimension in all tradeoff decisions
 - A “perfect” system that cannot be changed is fundamentally broken, because the context around that system *will* eventually change
 - Technical debt

Asking Questions


Techniques



- Elaborative Interrogation
 - Uses questions like “Why?” and “How?” to understand the meaning of the information to be learned.
- Socratic Method
 - Based on asking and answering questions to stimulate critical thinking and to draw out ideas and underlying presumptions.
- Five Whys
 - Used to learn the root cause of a defect or problem by repeating the question “Why?” Each answer forms the basis of the next question.

More Techniques

Mnemonics



- Really only good for memorization, naturally
- But a few things do need to be memorized
 - DIRT MCG (or the new DR MC GIFT PX)

Overview

- Often used for personal goals, but can be used for learning
- Uses your brain's visuospatial thinking ability (which *everyone* has)
- Leverages human tendency to remember our *experiences*

What is PDCA?

- Plan
 - Plan what you're going to do to learn some material
- Do
 - Do what you planned; set about actually learning it
- Check
 - Check how well that plan worked—both how easy and how effective it was
- Adjust (or Act)
 - Adjust your plan for future learning, emphasizing techniques that worked well

Triage

- Time is your most constrained resource
- Remember to consider ROI of your time
 - So *focus* on what matters most
- But remember to build a strong mental model
 - So *generalize*
- Given the contention, err on the side of learning too much than not enough
 - And keep checking whether that was valuable