Math Forum Reflective Essay

Forest Kobayashi

Prompt. Write a 750-1000 word reflective essay about your growth as a speaker in Math Forum. Successful essays will incorporate specific examples of lessons learned, together with accompanying allusions to your own talks as evidence. Readers of your essay should easily be able to sense the extent to which you have been engaged in Math Forum.

Please note that the audience for your essay is primarily your instructor, but every member of the mathematics faculty should be able to read (and enjoy) your essay. Finally, to submit your essay, please upload a PDF copy of your essay to your drop box, and please name your file lastname-essay.pdf.

Response.

I've really enjoyed my time in Math Forum. I've learned a lot about public speaking, managing my verbal/physical tics, and presenting technical information in a non-interactive setting. Honestly, I wish there were a sequel course — I'd be really excited to try my hand at a full-hour lecture format, or something like it. I guess I could always try to start making YouTube videos or something... but yeah, anyways, here are some of my big takeaways from the class:

1) It is much harder for me to present a non-technical topic than it is for me to present something like a theorem.
2) Giving a talk is a vastly different experience from presenting material in an interactive setting (e.g. tutoring). In the latter, you can sometimes rely on your audience to signal where you need to slow down, what isn't quite clear, and so on. Because talks are more static and non-interactive, you have to put in a *lot* of work ahead-of-time to identify places where your audience could get lost. As such,
3) Knowing how to explain a topic well is *not* the same thing as knowing how to give a good presentation on it. The latter requires a lot more work, including (but not limited to)
   (a) doing extensive meta-analysis of your own understanding of the subject,
   (b) compressing that understanding into an easily-digestible model that you want to communicate to your audience, and
   (c) finding ways to efficiently translate that model to words, pictures, and any other medium of communication.

I'll go in-depth on these points below, but first, here's a list of some smaller lessons I won't have time to talk about:

- I didn't realize how quickly I talk sometimes
- I didn't know how short 10 minutes could be
- How it can often be more helpful to focus time on *introducing* the problem as opposed to *describing* it.
- Explanations should maybe be a bit recursive. And they should get technical maybe only at the leaves of the tree.
- Knowing how to explain a technical topic well $\neq$ knowing how to *speak* well

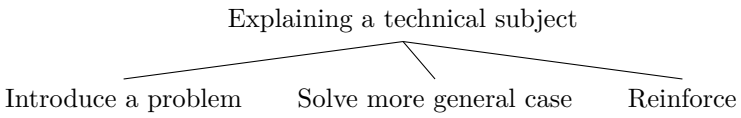

Figure 1: Introducing a technical problem

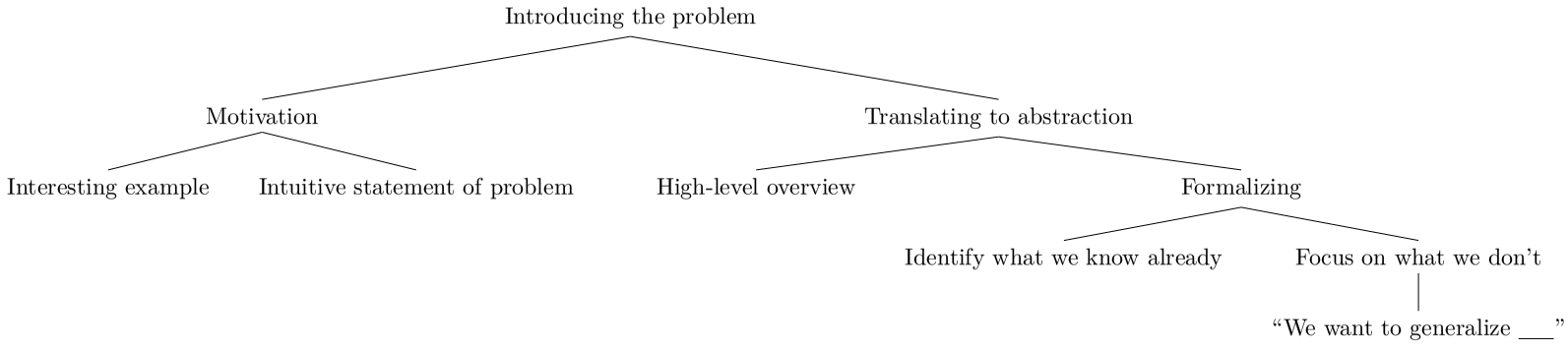

Figure 2: Introducing a technical subject

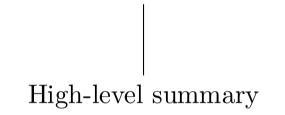

Figure 3: Explaining the solution

■