

Reflecting on My Evolving Goals

Ever since my first informal attempts at tutoring mathematics in college, the simplicity and clarity of math has drawn me to share it with those that don't grasp it. Since then, imperceptibly at the beginning, then with determination, I was driven toward a career in mathematics education. Having earned my bachelor's degree in sociology, before entering MSU's Master of Art in Education program in the fall of 2013, I had no formal training as a teacher; therefore when I entered the program my foremost objective was to establish the formal foundations of my career as an educator. At that time among my learning goals were to gain greater knowledge of classroom management strategies, to improve my lesson-design skills, and to have a better knowledge of theories of education. As I would put it now, I simply wanted to know more about teaching.

Improving my teaching skills is still my most important professional goal, but the details of this objective have become better defined and their focus has shifted during the past two years. Instead of keeping my students on task with classroom management strategies now my goal is to motivate them to learn. Improved lesson-design is still on my agenda, but while in the past this meant focus on presenting subject content, today my goal is to make my lessons relevant to the specific students I teach in the given session. I also notice that in the past my conception of teaching was centered on how I, the teacher, interact with the subject content, while today my aim is to facilitate my students to explore the subject content for themselves. This shift in my perspective came gradually as through my studies I became acquainted with the principles of active learning that put the learner in the center of educational design. In hindsight, I see how far my conceptions of education have evolved in these past three years. Seeing my past goals as somewhat naive is a proof of my evolving understanding of teaching.

I enjoy solving a range of mathematical problems, especially when I can find "my own way" to the problem solution. This creative problem solving inspires my teaching as well. As in the past, for my classroom motto I still a quote George Pólya for my students: *"A great discovery solves a great problem but there is a grain of discovery in the solution of any problem. Your problem may be modest; but if it challenges your curiosity and brings into play your inventive faculties, and you solve it by your own means, you may experience the tension and enjoy the triumph of discovery."* I hold this idea in great regard, and I encourage my students to be intellectual risk takers who value creative approaches to mathematical problems.

I believe that the only meaningful way of learning STEM subjects is by building the learner's own understanding of the concepts and problem solving processes involved; teaching these subjects must serve the same objective. The quantity and complexity of the material presented in a typical high-school mathematics course is so vast that learning by memorization does not produce the desired contextual knowledge that students will need as lifelong learners. Learning and understanding are inseparable concepts, my goal is to teach mathematics for understanding.

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