

Personal Goal Statement

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Education PhD with a specialization in Mathematics Education Leadership, secondary concentration in Instructional Design and Technologies.

I have been a private math instructor for more than twenty years. After working comfortably within the confines of this environment for so long, it took some courage to step back into academia to pursue my Master's of Education degree at Mason a year ago. I chose the Instructional Design and Technology program because I wanted to acquire skills that would enrich my practice and to find innovative ways to support my students. As anticipated, the program has allowed me to accomplish those aims. Making my way through the degree process, something else happened that I did not expect.

While fulfilling the required coursework for the master's degree, I was introduced to the inner world of graduate research. Once I had access to the library's databases, I was overwhelmed by the breadth and depth of existing research. It was daunting and wonderful to find out how much we know and how many questions remain unanswered. Before taking the course, the possibility of doing original research had never occurred to me. The process of creating my research proposal for the course whetted my appetite for further inquiry.

My constant search for better methods and greater understanding to help my math students has made me a lifelong consumer of research. As a private instructor, within the course of a normal week it is common for me to teach the full spectrum of mathematics from pre-algebra through multivariable calculus and elementary statistics. My students may come from public or private grade schools, from homeschooling environments, or from undergraduate

programs. In order to provide to them the highest quality instruction possible, I must constantly review the curricula and materials of multiple jurisdictions and institutions. It is also necessary for me to stay up to date on any standards students must meet in each of their disparate environments.

My perspective from working within this broad landscape for so long is that there is less variability at each level between different institutions' methods than they are likely to believe. And yet, while horizontally there may be consistency, as my students rise through their coursework their experience is of a constantly changing landscape. In order to help them succeed, the goal we set is not to target whatever standards are currently in front of them, but to expand their mathematical skills and understanding so that they can navigate the shifting terrain over time.

As I have watched my students grow and successfully move into advanced mathematics, it would be easy for me to think that I have found the elements necessary for success. Though I have developed a strong intuition for what teaching methods will help a student reach their learning goals, the reality is that I know only that those methods and approaches are successful for my population of students within the environment of my studio. Across my desk my students bring me stories of how much their classroom teachers struggle to reach students, and I think about the difficulties of working with so many students who have widely varying degrees of interest and skill en masse. Would the methods that I have found to be successful on an individual basis work in a group environment? Has research been done on methods that I employ? Do they fall apart at scale? How can we as educators improve the outcomes for all learners?

My time in Mason's Graduate School of Education has convinced me that it is time for me to take a more active role in the larger world of practicing educators. The school's commitment to take research into practice absolutely aligns with the professional development trajectory I wish to pursue. In a series of conversations with faculty members from the Mathematics Education Leadership Program, I was delighted to find that the questions they are addressing are the questions that I continuously explore: How do I move a student from the concrete to the abstract? How do I help them over the crucial hurdles of pre-algebra and precalculus. What impact does readiness have on outcomes? What do the latest discoveries in neuroscience tell us about learning? It is clear to me that the nature of the research that the program is pursuing is relevant to my experience and to my interests.

I cannot enumerate empirical career objectives here at the threshold of my further studies because I know that my goals will morph and change as my experience and understanding of the world of academic research increases. I wish to dig deeper into what has been already discovered and to become a part of the community whose work expands and refines that knowledge. Professionally I wish to further my knowledge and implement what I learn in my practice and in the classroom. Ultimately my goals are to stimulate and to satisfy my own curiosity, to add to the body of existing research, and to continue to do meaningful work.