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Scott Annin* (sannin@fullerton.edu), 800 N. State College Blvd, Department of Mathematics, California State University, Fullerton, Fullerton, CA 92831. *Teaching Our Students to be Better Problem Solvers: A Challenge and Charge to Mathematics Educators.*

Many mathematics subjects enjoy a foundation grounded in formulas and procedures that are familiar and routine. In such cases, natural pathways into the content are present. Calculus, Linear Algebra and many other subjects fall into this camp. Problem solving, however, is a different animal. Problem solving is a mathematical skill that pervades the aforementioned subjects and more, and yet, it can be a slippery enterprise. How do we teach it? In the 1940s, George Polya proposed a 4-step process in his timeless classic "How To Solve It". Many other manuscripts on the subject have followed. Still, teaching problem solving has remained one of my greatest challenges as a mathematics educator. And yet, teaching students to be capable problem solvers should be one of our greatest aspirations as educators. I have spent much time thinking about this as an author of a book to prepare high school students for the American Invitational Math Exam, and as director of a program preparing undergraduates for graduate school through a direct emphasis on problem solving, paired with more traditional research experiences. I will discuss my challenges, triumphs, and lessons from trying to teach problem solving to students, and in doing so, we will try to solve many problems along the way! (Received September 05, 2017)