1125-VQ-1906   **Daniel E. Otero*** (`otero@xavier.edu`), Department of Mathematics, Xavier University, Cincinnati, OH 45207-4441. *Preparing Students for Trigonometry with a Primary Source Project.*

In many precalculus courses, there is the obligatory unit on trigonometry. Its goal is to impart to the student as efficiently as possible a long list of useful things to know about the six trigonometric functions: angle measurement, the six functions and their graphs, a dozen or so identities, blah, blah, blah. Students are typically marshaled through these packaged presentations, and must await a (perhaps optional, and typically quite brief) "Applications" section to see where and how these notions are applied before natural questions of why it all matters get addressed. The author is one of seven Principal Investigators for an NSF-funded grant, *Transforming Instruction in Undergraduate Mathematics via Primary Historical Sources* (TRIUMPHS), which is designing curricular materials for teaching standard topics in the university mathematics curriculum via the use of primary historical sources. A one-week-long Primary Source Project for students who are about to study trigonometry will be presented in this talk; it uses excerpts of the writings of Greek, Hindu, Islamic, and European scholars across the long history of the subject to show students that real people interested in natural mathematical problems developed trigonometry to address these problems. (Received September 19, 2016)