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Daniel E Otero* (otero@xavier.edu), Dept of Mathematics & Computer Science, Xavier University, Hinkle 104, 3800 Victory Parkway, Cincinnati, OH 45207-4441. *Hindu sines, Persian tangents, and European triangles: teaching trigonometry with original sources*. Preliminary report.

In an effort to enliven a traditional classroom treatment of the fundamental principles of trigonometry, three mini-lessons are presented that give students a sense of the wide scope of the history and context of the subject. These lessons are built around three texts: from the sixth century, Varāhamihira's *Pañcasiddhāntikā* (*Five Systems*), an early table of sines; from the eleventh century, al-Bīrūnī's *Kitāb fi ifrād al-maqāl fi umr al-ẓilā* (*Exhaustive Treatise on Shadows*), an early version of tangent and cotangent values; and from the sixteenth century, Regiomontanus' *De triangulis omnimodis* (*On Triangles of All Kinds*), the first systematic treatment of trigonometry as a geometric theory. Comments will also be shared regarding effective pedagogy in the use with today's undergraduate students of primary source texts whose cultural distance from modern readers is high. (Received September 11, 2014)