

JOEL SILVERBERG, Roger Williams University, Bristol, RI 02809

*The Mathematics of Navigation as Taught in Private Venture Schools, Academies, and Colleges in the New England Colonies, 1725–1850*

Curricula and textbooks used in colleges, academies, and private schools in the newly formed United States between 1776 and 1826 show a gradual evolution from a vague exposure to whatever mathematical works, primarily of British origin, were in the possession of tutors, teachers, and faculty, to a more structured plan in which students progressed through arithmetic, algebra, geometry, and trigonometry, culminating in an application of these areas of mathematics to navigation and surveying, supported by texts specifically written for that purpose.

While these navigational topics can be found in documents dating from the earliest years of the 18th century, reflecting the study of navigation from private tutors and almanac makers, by the second decade of the 19th century the teaching of navigation had divided into at least two paths: one for professional mariners typified by the work of Nathaniel Bowditch, and a second as a capstone liberal arts experience (intended to teach scientific and mathematical principals) at colleges and universities, exemplified by texts written by Jeremiah Day, Professor of Mathematics and eventually President at Yale University.

This talk will present the details of these curricula and the ways in which navigation was used to illuminate the principles of Geometry and Trigonometry for the students of early America.