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OER, PreTeXt, and Scholarship

Open resources for mathematics teaching have come a long way in the past decade. Most early examples consisted of lecture notes hastily typeset in LaTeX whose best quality was the (lack of) cost.

Modern OER projects in mathematics are collaborative, community-driven, and often competitive with comparable commercial products. For example, textbooks written in PreTeXt can be produced in HTML, PDF, EPUB, and even Braille. Ancillary resources can include lecture slides, WeBWorK question banks, worksheets, and Jupyter notebooks.

But this won't be a talk about what one can do in PreTeXt — that would repeat too much of my recent FYMSiC talk. Instead, I will talk about some of the scholarship associated with PreTeXt. I will discuss my own work, including collaborative authoring, development work, and pedagogy, and how it has impacted my teaching. But I also want to highlight some work of others, such as the role of AIM and the UTMOST project, a partnership with Runestone Interactive, and a project to support alternative assessment (such as standards-based grading) using a web-based problem generation interface.