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Improving Flipped Classroom Software. Preliminary report.

The flipped classroom imposes increased demands on software because a student's first exposure to each new topic or problem type is typically via software without an instructor.

Years ago, publishers abandoned multiple-choice and now accept arbitrary short answers to most problems. Short answer software is widely accepted as "good enough." Yet when grading manually, good instructors still routinely insist on step-by-step solutions to permit optimal feedback. Math practice software for flipped classrooms should also support student entry of step-by-step solutions and provide appropriate help at each step, regardless of method.

This presentation includes examples from several publishers and a demo by the presenter. The demo, which (a) requires Windows, (b) has an idiosyncratic user interface and (c) poses only a limited range of problems, can be freely downloaded although it is not a practical program. Its purpose is simply to model a help-at-every-step approach to problem-solving for both publishers and prospective adopters, especially those anticipating flipped classrooms. (Received June 17, 2014)