

Advantages and Drawbacks of Using Online Platforms for Teaching Mathematics: The Case of MyMathLab

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Abstract

There is no shortage of online platforms used to teach Mathematics. Top textbook publishers are now including the platforms in combination with a printed or e-textbooks, and are marketing the platforms as a substantially helpful tool for both students and instructors. Having used many of those platforms over the past 14 years, I give an overview of some of their strengths and weaknesses overall, and use data collected from a specific platform that highlights the potential benefits of the platform, namely be acquiring procedural competence only. My hypothesis is that students' overreliance on the help tools of the platform, along with the large number of procedurally-oriented questions makes the platform useful for acquiring procedural knowledge, but not necessarily for understanding concepts. I propose modifying the reliance on a textbook platform to the creation of stand-alone courses that involve the use of interactive videos. The features for this approach would enable students to further enhance their conceptual understanding of the content, all while providing them with the interactive engagement needed to understand content. I contend that a hybrid courses that uses interactive videos and smartphone apps would be more effective in delivering and ensuring a better and more rewarding educational experience for the students.

Keywords: Higher Education, Online Platform, Interactive Videos, Conceptual vs. Procedural Knowledge, Student Engagement