

Abstract Submitted
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Student Responses to a Flipped Introductory Physics Class with built-in Post-Video Feedback Quizzes ROBERTO RAMOS, University of the Sciences — We present and analyze student responses to multiple Introductory physics classes in a university setting, taught in a "flipped" class format. The classes included algebra- and calculus-based introductory physics. Outside class, students viewed over 100 online video lectures on Classical Mechanics, Electricity and Magnetism, and Modern Physics prepared by this author and in some cases, by a third-party lecture package available over YouTube. Inside the class, students solved and discussed problems and conceptual issues in greater detail. A pre-class online quiz was deployed as an important source of feedback. I will report on the student reactions to the feedback mechanism, student responses using data based on anonymous surveys, as well as on learning gains from pre-/post- physics diagnostic tests. The results indicate a broad mixture of responses to different lecture video packages that depend on learning styles and perceptions. Students preferred the online quizzes as a mechanism to validate their understanding. The learning gains based on FCI and CSEM surveys were significant.

Roberto Ramos
University of the Sciences

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