



**Arancha Alarcon-Fleming**

**Courses:** Mechanics of Materials I & Engineering Analysis II: Statics and Dynamics

**Students:** 92-100 per course

[bit.ly/tx16ala](http://bit.ly/tx16ala)

# Incorporating Videos and Quizzes in Canvas

## Context

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The courses Mechanics of Materials I and Engineering Analysis II: Statics and Dynamics only use traditional books. Some students need to be engaged in different ways since this class may not be part of their major. I integrated lightboard videos on Canvas to provide supplemental learning tools for students. I also implemented in-class quizzes using Canvas to monitor student progress.

## Project

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This project shows how to increase the level of engagement for students, particularly those who might be taking the class to fulfill a breadth requirement. This includes adding YouTube videos recorded in Northwestern's lightboard studio as well as quizzes to test students' knowledge of the material before the lecture.

## Objectives & Outcomes

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The main objective of this project was to provide supplemental learning tools to engage students in a classroom-like setting outside the classroom.

The videos were a success since they can watch them multiple times in preparation for the tests. The class response to those was very positive.

## Results

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Through discussion with students, I learned that they liked the lightboard videos because they could watch the material in advance. The lightboard videos are very useful in the classroom to consolidate concepts. In addition, some students even came to class with insightful questions that led to further discussion in class. Quizzes were not as useful; the challenges of quiz preparation outweigh the benefits.

## Lessons Learned

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Students had a positive response to the extra material provided and the flipped classroom approach. I found that students like to watch videos where more problems are solved. Future work will include measuring the success with formal surveys. For quizzes on material to be taught in class, using paper quizzes would be a better approach than using Canvas quizzes.