

Reflection Exam Question

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Context: Out of class, Slope Stability Analysis and Geotechnical Earthquake Engineering

Keywords: exam wrapper, knowledge gaps, guided self-learning

Student Activity Time: 2-4 hours

At the end of a take-home exam, students reflected on course topics that were unclear and wrote an exam question of their own for one of those unclear topics.

Introducing the Reflection Activity

As part of a take-home exam, students chose a murky topic from the course and fully developed an exam question for the topic. The purpose of this reflection activity was for students to pause and look back on their recently acquired knowledge and evaluate it.

On the take-home exam, the students were asked to create an exam question that addressed a specific portion of the subject material that was murky or unclear. Students were asked to provide the question(s) and answer(s) and were informed that it could be conceptual or quantitative. After students submitted their personally developed exam question, the educator graded the reflection question based on the depth, quality, and instructiveness. It was worth about a fourth of the exam grade.

In terms of outcomes, after students reflected on knowledge of course content there was an opportunity for them to practice using their knowledge from a different perspective. As well, they may have better understood the course content after reflecting on it and writing an exam problem. This reflection activity had the potential to contribute to their knowledge of what they understand and what they don't understand from the course.

Recreating the Reflection Activity

	Description
1	Introduce students to the reflection activity.
2	Include the reflection question at the end of the exam.
3	Assess the reflection question using depth, quality, and instructiveness as the criteria.

In the Words of the Educator: Tips and Inspiration

Create an environment that encourages reflection. It is important to build a trusting relationship with students. This type of relationship will help the students feel safe as they engage in the reflection activity.

Frame the reflection activity and provide examples. It is important to properly frame the activity by giving a demonstration.

Encourage students not to limit themselves. For most students, this will be the first time they have engaged in a reflection activity like this one. Encourage them to dig deep in order for the reflection activity to be meaningful for them.

What was the inspiration for the reflection activity? One time as I was developing an exam I was brainstorming questions I should ask students, and this idea popped into my head. It seems like a good way for them to analyze their knowledge or gaps in their knowledge and then work through plugging those gaps. I have now used this reflection activity in a number of classes and I have found it to be rewarding for the students based on their written submissions and their subsequent verbal feedback.