

Minute Papers: Strengths, Insights, and Improvements

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Context: In-class; Mechanical Engineering

Keywords: educator feedback, self-awareness

Student Activity Time: 2-3 minutes at the end of a class session

At the end of the class session, students reflected on their learning in that class session and how features of that class session supported their learning.

Introducing the Reflection Activity

Periodically at the end of a class session, students anonymously reflected on aspects of the course session by responding to questions about the course session in what the educator called minute papers. The purpose of these minute papers was for students to reflect on their learning that just took place in the class session.

Throughout the term, when the educator wanted feedback from students about the course with respect to a specific class session, he asked them to provide anonymous feedback in response to these questions:

1. Strengths: List strengths from today's class. What material do you feel most comfortable with?
2. Insights: What new insights did you gain from today's class?
3. Improvements: List areas of improvement for today's class. What material do you still have problems understanding?

After the class session, the educator read the minute papers to see threads in the students' reflections. Based on this feedback, in the next class session the educator addressed and highlighted common themes from the feedback. Particularly, the educator would re-teach content areas that a significant number of students didn't understand.

In terms of outcomes, the reflection activity provided students an opportunity to reflect on their work and potentially increase their metacognition—learn how to learn, to be self-regulated, and to be self-directed learners. This reflection activity also provides the educator with valuable feedback about the students and their learning.

Recreating the Reflection Activity

	Description
1	Choose questions to ask of students in the minute papers.
2	Periodically stop a class session a little early to engage students in minute papers.
3	Read, analyze, and prepare responses and feedback to the minute papers.
4	In the next class session, give students feedback on their minute papers.

In the words of the Educator: Tips and Inspiration

Respond to and address students' feedback. If the students know feedback is coming, they will be prepared for it. They actually want the feedback. So, as long as you use the feedback, you will get even better feedback in the future.

What was the inspiration for the reflection activity? Over my years of teaching, this reflection activity has aligned with my approach of receiving and responding to students' feedback. My teaching has also been informed by my active involvement in the annual ASEE conference. Additionally, the work of four people have informed the reflection activities I use in classrooms—Dan Apple, Thomas Angelo, K. Patricia Cross, and Rich Felder.