

APPLICATION

This exercise is typically used at the end of a session in order to provide teachers with feedback on what students have learned about a particular topic, and to allow students to reflect on their own learning.

Applications include:

- developing critical thinking skills through reflection
- enabling students to take an active part in their own learning
- encouraging students to engage in metacognitive strategies

MATERIALS

Pen & paper (or note cards)

Alternatively, you could ask students to write their reflections on an online discussion forum.

TIME

1 minute for students to reflect

Allow yourself some time to read through the responses (it usually takes around 1 minute to read through 4 responses).

Allow some time in the following session to discuss the responses with your class.

PROCESS

At the end of a session, ask the group to respond, in writing, to 1-2 short questions prepared by the facilitator.

It is more time effective to prepare forms or cards for your students to write on, but you can also display the questions for all students to see, or use an online forum.

Allow your group 1-2 minutes to write their responses before collecting them. In order to keep to the one-minute time frame, this exercise should focus on a single concept.

There is a sample template at the end of this resource, which you may wish to adapt.

Share the responses with your class when you next meet.

OVERVIEW

Minute papers are one of the most commonly used CATs (classroom assessment techniques) in higher education (Angelo and Cross, 1993), designed to provide anonymous feedback on what students are learning in class. Some research suggests that when students reflect on the material presented to them at the end of class, they retain almost twice as much of its factual and conceptual content (Menges, 1988, in Cuseo).

As well as a feedback strategy, the minute paper can be used as a “student-centered reflection strategy designed to help students discover their own meaning in relation to concepts covered in class, and to build instructor-student rapport” (Cuseo). Additional research indicates that students can learn to engage in metacognitive strategies if they are asked self-assessment questions on a regular basis. By asking students to reflect on their own learning, we encourage them to think deeply and critically (Resnick, 1986). The Minute Paper encourages students to reflect beyond surface learning, towards deeper reflection and higher learning.

REFERENCES

Angelo, T. A. & Cross, P.K. (1993). *Classroom Assessment Techniques: A Handbook for College Teachers*, San Francisco: Jossey-Bass Publishers.

Cuseo, J., n.d., One Minute Paper, <http://oncourseworkshop.com/self-awareness/one-minute-paper/> accessed 4/11/2014

Menges, R. (1988). Research on teaching and learning: The relevant and redundant. *Review of Higher Education*, 11, 259-268.

Resnick, L. B. (1986). *Education and learning to think. Special Report*. Pittsburgh: University of Pittsburgh, Commission on Behavioral and Social Sciences and Education.



The Minute Paper

In concise, well-planned sentences, please answer the questions below:

1. What are the two [three, four, five] most significant [central, useful, meaningful, surprising, disturbing] things you have learned during this session?

2. What question(s) remain uppermost in your mind?

3. Is there anything you did not understand?