01
Active learning strategy

ACTIVE LEARNING STRAGEGY 01

Minute Paper

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THE STRATEGY

MINUTE PAPER

Minute paper is a brief classroom exercise that can be used to encourage students to reflect on their learning. The instructor poses one or more questions related to the current lesson, and students are asked to quickly write their responses and submit them to their instructor. Thus, minute paper also serves as a formative assessment technique.

The brief nature of this activity makes it easy to review student responses and requires minimal time to facilitate in class. Despite its simplicity and ease of use, this strategy can be of great benefit to both instructors and students alike. The activity promotes active learning, which can be especially valuable in larger classes, where instructor/student relationship building can be challenging. As they are being asked to reflect on the current lecture, students are encouraged to actively listen and remain focused during class. The minute paper also provides instant feedback to both teachers and students in relation to the levels of student understanding achieved during the lecture. The instructor can quickly see what topics students perceive as having the greatest importance, and what misconceptions or questions remain. This can then be addressed in the next lecture and can thereby improve the students' learning experience in a timely manner. Thus, students may be more inclined to give valuable feedback through a minute paper activity rather than through student evaluations that take place at the end of the semester, where their responses can only improve the learning experience of the next cohort.

Many variations of the minute paper are possible. Students may be asked to explain the most important thing they learned in class, or to reflect upon any questions they have which remain unanswered (Angelo & Cross, 1993). The minute paper could be completed individually or collaboratively with small, or even large, groups. Students' responses could remain anonymous or not and could even be graded. Additionally, the minute paper could be conducted at the beginning, middle, or end of a class, or could be implemented multiple times throughout the lecture.

RESOURCES

Although no resources are required, you may wish to provide students with a handout with the questions you wish students to answer. (See minute paper handout). Alternatively, blank index cards can be distributed to students for this exercise.

WHAT YOU CAN DO TOMORROW

Near the end of your class ask students to write their answers to the following questions:

- List 3 of the most important points you learned in today's class.
- List 2 specific areas that are unclear or that you're unsure of from today's class.

Let students know that they will have one minute to complete this task. Have students leave their written responses on their desks or ask them to hand them to you on their way out of the classroom. Read through student responses to gain an understanding about what students have learned, and what questions remain. Address any questions or misconceptions with your students during your next lecture.

Image 1: Students listing important points learned during class

STEPS FOR IMPLEMENTATION

STEP 01

PREPARATION

Write down some questions to which you would like your students to respond to. The questions may be related to the desired learning outcomes or tailored to specific aspects of the session.

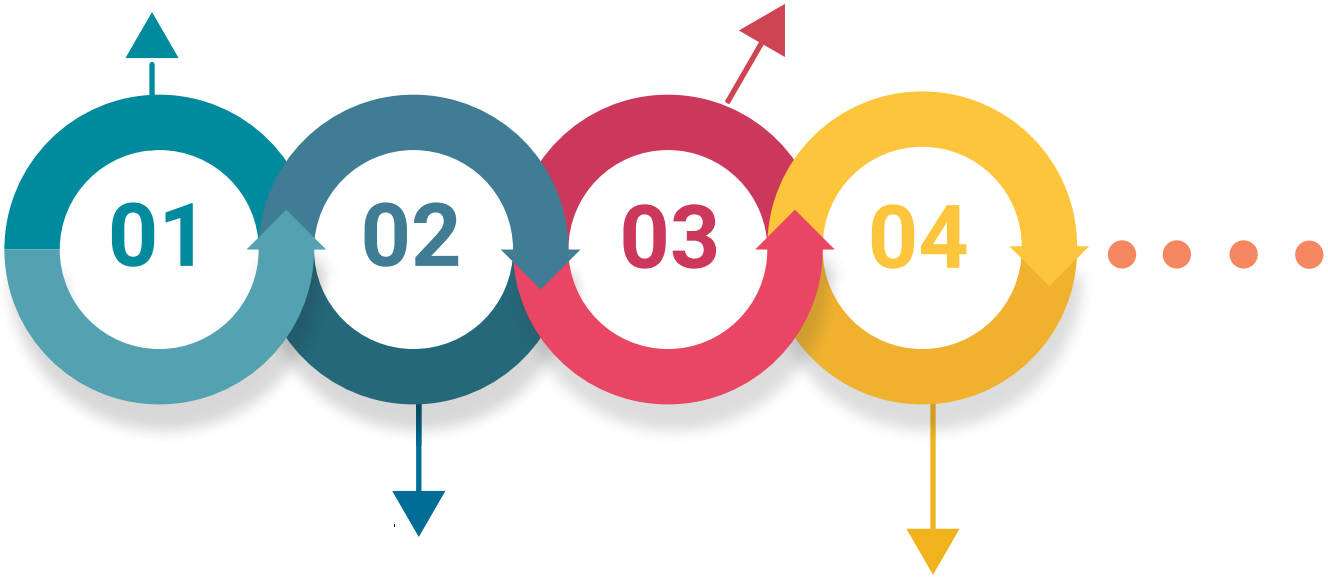
1. List 3 of the most important points you learned in today's class.
2. List 2 specific areas that are unclear or that you're unsure of from today's class.
3. Complete the following math problem [enter a problem].
4. How can the information you learned in today's class be used in your day-to-day life?
5. What concepts from today's class remain unclear?
6. How could the online learning activities provided in this course be improved?

Be sure to select question(s) that will provide you with useful feedback and consider how you might act on the students' responses (e.g. there is little merit in asking whether students would prefer a midterm evaluation if you have already decided that you will have one).

STEP 03

GET YOUR STUDENTS READY

At the appropriate time during the lecture, present students with the prepared questions and ask students to get a piece of paper (you could also provide them with a sheet of paper or an index card). Ask them to write their name on the top of the paper, or inform them to leave their names off if you prefer that they remain anonymous.



STEP 02

ANONYMOUS OR NOT?

Decide whether or not you would like this exercise to be anonymous. Anonymity typically results in more honest responses; however, it prevents you from discussing and addressing responses with individual students.

STEP 04

PRESENT YOUR QUESTION(S)

Write one to three questions on the board or incorporate the question(s) in your presentation slides. Alternatively, you can print the question(s) on the sheets of paper you have provided.

STEP 05

START TIMING

Let students know that you will be giving them one minute (or more time if you prefer) to respond to your question(s) honestly and concisely. Encourage point form responses if appropriate.

STEP 07

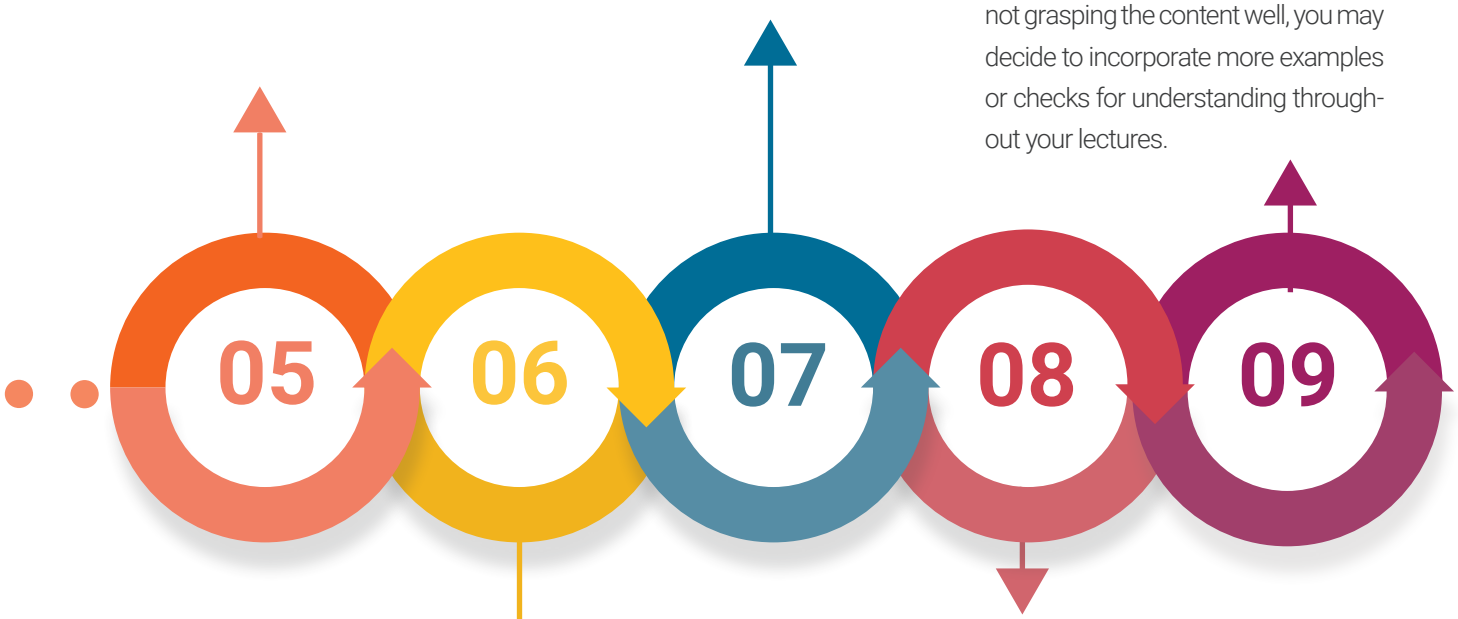
REVIEW THE RESULTS

Read through all the student responses and list the main ideas in each response. If you notice repetition in the responses, start to tally them up, rather than repeating them. In the end you should have a tallied list.

STEP 09

SHARE

During your next lecture, preferably at the beginning, share a summary of the responses with your class. Show the students that you did take the time to read through the responses. If appropriate, let the students know what action you have decided to take. If, for example, students reported that your online learning activities were useful, you may choose to post more of these activities. Alternatively, if the responses suggest that students are not grasping the content well, you may decide to incorporate more examples or checks for understanding throughout your lectures.



STEP 06

COLLECT THE PAPERS

Allow students time to discuss their answers and questions with their peers (Angelo & Cross, 1993). If the activity was completed at the end of class, you could ask your students to hand you their responses on their way out the door.

STEP 08

REFLECT

Reflect upon the responses you received. Did students achieve the learning outcomes you set out in your lesson? Are there any common mistakes or misconceptions you may want to address? What concept(s) should you revisit or clarify in the next lecture? Can you make any changes to your teaching style or course structure which might better support student learning?

OVERCOMING PUSHBACK

Even though this activity is quite simple and requires minimal time to complete, students may express frustration with a) not knowing where to start and b) understanding the purpose of the exercise.

I DON'T KNOW WHERE TO START...

Providing structure in terms of the number of points students may include in their responses can help to overcome potential discomfort with the open-ended nature of this activity. You may also wish to model an appropriate response the first time you use this strategy in your class. Be careful not to lead students to respond in a particular way, however; you want them to express themselves authentically and honestly.

WHY ARE WE DOING THIS?

You may wish to emphasise the importance of active participation and reflection in the classroom, and the positive effect this can have on student learning. Additionally, explaining to students that you will read their responses and plan to use them to identify areas that may require further clarification can also help to reinforce the purpose of the exercise.

CASE STUDY

In a session facilitated for new clinical instructors and faculty advisors, a minute paper activity was posted on a PowerPoint slide at the end of the session. This allowed the learners to reflect on what they had taken away from a very busy afternoon of training and to provide facilitators with feedback on the overall session.

Participants were given one minute to jot down their key takeaways from the session, ask any remaining questions, and provide feedback regarding the session.

Image 2: Presenting minute paper task to participants.

Handouts with instructions were also provided to the learners, and participants were asked to write their responses directly on the handout. This simple task encouraged participants to recall the big ideas from the session, reflect on the experience, and think about what further questions they had.
After the session was complete, the facilitators tabulated the ideas generated. In doing so, they were able to identify components of the session that were more memorable for the learners, as well as aspects that could be improved in future sessions. As this particular session was only a one-day event, remaining questions that were provided in the responses were addressed in an email to all participants.

Image 3: Learners participating in minute paper activity.

SUMMARY

The minute paper is a very simple active learning and feedback strategy, which can also serve a formative assessment function. Although the activity is quite short, it gives students an opportunity to reflect on learning from the lecture and compose any outstanding questions. As a formative assessment strategy, the minute paper also provides the instructor with timely feedback, which may be used to further improve student learning. After collecting and analysing student responses, the instructor can then address student misconceptions and remaining questions. In doing so, the instructor conveys the message to students that they are respected and that their success is valued. Thus, all students, even those that may not be comfortable speaking in class, are given a voice.

FURTHER READING

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TEMPLATE

Minute Paper Handout

Please take a minute to jot down your key takeaways and remaining questions from today's lesson. Point form is fine. You do not need to add your name.

List 3 of the most important points you learned in today's class.

List 2 specific areas that are unclear or that you're unsure of from today's class.

* Questions adapted from Angelo & Cross (1993).

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