



Encourage collaboration

Peer Instruction

With the Beekee Box/Hub
Offline digital learning devices

Peer Instruction

What is it?

Peer Instruction is a pedagogical method created by Harvard professor Eric Mazur in the nineties. It combines self-paced remote study with live face-to-face interaction with peers. During class, the teacher asks a conceptual question based on a resource (reading, video, etc) that was studied carefully at home by students. Learners are asked to answer the single-choice question individually, discuss their answers with their peers, and finally, take the quiz again. The teacher then debriefs on the answers and provides an explanation of the expected response.

Why do it?

This method allows a better understanding of the concept studied in class and engages the learner in the course. Learners can also identify the weaknesses in their own thinking by explaining their choice to their peers. Studies show that thanks to the confrontation of points of view between peers, the results of the question tend to be better the second time, after discussion. Thanks to the Peer Instruction, teacher can keep a track of the learners' understanding.

When to use it?

Start a session with this activity or use it after a brief lecture.

How to do it?

➤ Required Materials

For the voting session, you can choose the app "Digistorm" or the activity "Choice" in Moodle.

➤ Steps

1. Select a resource for students to study at home
2. Create a question with an intermediate level of difficulty that only addresses one concept from the chosen resource and provide four answer options. The answers to this question may represent the preconceptions that students have of this concept or the typical false answers that learners usually provided.
3. During the course, make a brief presentation to introduce the concept.
4. Ask the question and present the four possible answers.
5. Let the students vote once. If the total number of correct answers is greater than 70% skip to another question and repeat the steps from the start. If it is less than 30%, revisit the concept with them.
6. Give learners 2-3 minutes to discuss with their peers and justify their answers.
7. Make them take the quiz again.
8. Share the results and discuss the answers with them. Explain the correct answer.

Use case

Deepen learners' understanding of a concept with peers

Context

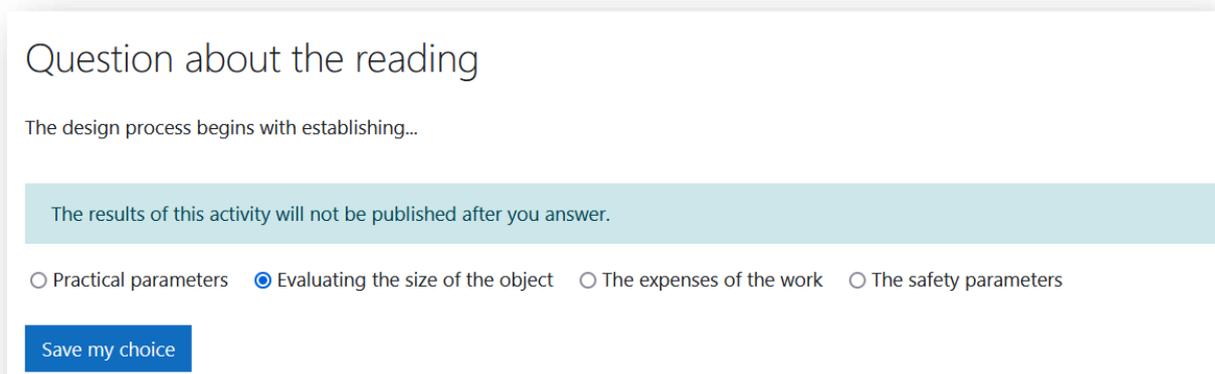
The pedagogical method of Peer Instruction was used in the blended course “How to be a Woodworker”. The platform Moodle was chosen to deliver the educational content. This course combines practical work with theoretical parts. During the remote session, learners were asked to read a manual on “How to Build a Table”. To avoid wasting time reviewing the contents of the manual, the teacher decided to check directly if the important concepts had been understood. This way, he could use the live session to practice. At the beginning of his course, after presenting the program, he conducted a Peer Instruction activity.

Tools

The teacher used the activity “Choice” for the voting on Moodle. It allows the teacher to easily view the answers, evaluate the percentage of correct answers and avoid displaying the results to learners.

Why do it?

It is more interesting to devote face-to-face session to carrying out supervised practical work and collaborative activities. Remote time allows learners to familiarize themselves with the theory, at their own pace.



The screenshot shows a Moodle Choice activity interface. At the top, the title is "Question about the reading". Below the title, the question text reads "The design process begins with establishing...". A light blue banner below the question states "The results of this activity will not be published after you answer." Underneath the banner, there are four radio button options: "Practical parameters", "Evaluating the size of the object" (which is selected), "The expenses of the work", and "The safety parameters". At the bottom left, there is a blue button labeled "Save my choice".

1 Single Choice Set

Question about the reading

Responses

	Practical parameters	Evaluating the size of the object	The expenses of the work	The safety parameters
Choice options	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of responses	0	1	0	0
Users who chose this option		<input type="checkbox"/>  Guaca Mole		

2 Visualization of the learners' answers

Use case

Increase the value of your scientific experiences with a conceptual question

Context

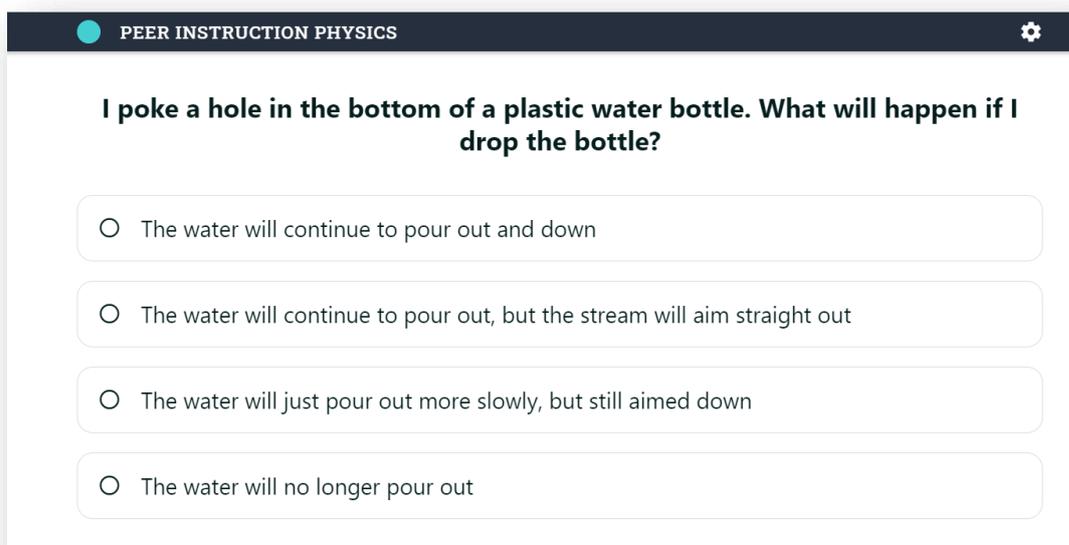
In this case, the Peer Instruction activity is used in a class of physics at university. The teacher wants to explain a new concept. He wants his learners to think and guess the answer before making an experiment and giving them an explanation. Learners are asked to choose one answer from four options (1) and then to discuss it with their peers. After discussion, learners re-vote. Instead of projecting the results and the correct answer on the screen, the teacher makes the scientific demonstration to concretely show them what happens.

Tools

The teacher used the app “Digistorm”, more precisely the tool “Survey” for the voting. With this tool, he can view the results (2) and hide them from the students (3).

Why do it?

Doing the scientific experience after the Peer Instruction activity will ensure that all learners are focused. Indeed, they will be interested in watching the demonstration after having discussed the subject and it will be a pleasure for learners who have answered correctly to see their answers come to fruition.



The screenshot shows a digital survey interface. At the top, a dark blue header contains a teal circle icon, the text "PEER INSTRUCTION PHYSICS", and a gear icon. The main content area is white and contains a question: "I poke a hole in the bottom of a plastic water bottle. What will happen if I drop the bottle?". Below the question are four rounded rectangular buttons, each containing a radio button and a text option. The options are: "The water will continue to pour out and down", "The water will continue to pour out, but the stream will aim straight out", "The water will just pour out more slowly, but still aimed down", and "The water will no longer pour out".

1 Peer Instruction exercise: learner's screen

795369

I poke a hole in the bottom of a plastic water bottle. What will happen if I drop the bottle?

- A The water will continue to pour out and down 0 0%
- B The water will continue to pour out, but the stream will aim straight out 0 0%
- C The water will just pour out more slowly, but still aimed down 1 50%
- D The water will no longer pour out 1 50%

1 LEAVE

2 Peer Instruction exercise: teacher's screen

795369

I poke a hole in the bottom of a plastic water bottle. What will happen if I drop the bottle?

- A The water will continue to pour out and down
- B The water will continue to pour out, but the stream will aim straight out
- C The water will just pour out more slowly, but still aimed down
- D The water will no longer pour out

1 LEAVE

3 Peer Instruction exercise: teacher's screen hiding results from students

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