Quiz due Nov 20, 2022 23:59 EST

Principles of Learning, Part 2

Question 1

1/1 point (graded)
In the standard peer instruction sequence, at which point do students receive feedback on their learning? Choose all that apply.

☑ When they pair up and discuss the given question with their partners

☐ When they answer the given question individually

☑ When the correct answer to the given question is revealed

☑ When they listen to other students explain their thinking during class-wide discussion

✔

Explanation
Certainly students receive right/wrong feedback when the question's answer is revealed, but they also receive feedback as they compare their reasoning to that of their peers in both small-group and large-group settings. Simply answering a question is useful practice, but doesn't provide feedback to the learner.

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ℹ️ Answers are displayed within the problem

Question 2

1/1 point (graded)

Considering strategic and deep learners, which of the following statements is mostly likely to bemade by a strategic learner?

○ "So glad we get to pick our own topics for our application projects."

○ "This class is just hard enough to be interesting."

◉ "Oh, the pre-requisite? Yeah, I took that course. Do I need to know anything from it for this course?"

○ "I've been learning some GIS in one of my other courses. Is it okay if I apply them to the project in this course?"

✔️

Explanation

"So glad we get to pick our own topics for our application projects," "This class is just hard enough to be interesting," and "I've been learning some GIS in one of my other courses. Is it okay if I apply them to the project in this course?" are reflective of deep learners since they indicate various intrinsic interests in the course material. Strategic learners, doing just enough to get through a course, often don't learn deeply enough to apply what they've learned in one course to subsequent courses. Nor do they always see the reasons to do so!

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Question 3

1/1 point (graded)

Suppose you display a problem for your students to solve, then immediately have a volunteer student come to the chalkboard to work through the problem in front of the class. Which of the following modifications to this activity would most directly enhance the learning principle of practice and feedback?

- ● Asking all students to take two minutes to attempt to solve the problem before calling on a volunteer.

- ○ Reassuring the volunteer that it's perfectly fine if she doesn't solve the problem correctly.

- ○ Asking all students to consider whether or not they've seen a similar problem in the past.

- ○ Having the volunteer identify which concepts or principles are most relevant to the solution of the problem.

✔

Explanation

None of these modifications are bad ideas, but only "Asking all students to take two minutes to attempt to solve the problem before calling on a volunteer," prompts all students to engage in the practice and feedback sequence. One of the risks of having a student work a problem at the board is that the other students might tune out. "Asking all students to take two minutes to attempt to solve the problem before calling on a volunteer," reduces this risk.

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Question 4

1/1 point (graded)
You typically ask your students to complete a project at the end of the semester in which they take ideas and techniques they've learned in the course and use them to solve interesting problems. This semester, in addition to having them turn in written projects for you to grade, you ask your students to share their projects with each other during an end-of-course poster session. Your students each explore different topics through their projects, and a poster session will let them learn from each other's various explorations. The addition of a poster session to this assignment leverages which of these intrinsic motivators?

- ⚪ Autonomy

- ⚪ Competence

- ⚪ Purpose

- 🔘 Community

✔️

Explanation
By creating opportunities for your students to share what they've learned with each other—and thus learn from each other—you've turned your class into a learning community.

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Question 5

1/1 point (graded)

Considering strategic and deep learners, which of the following statements is mostly likely to be made by a deep learner?

○ "Since we can drop our lowest problem set grade, and I have a 94 average on the first nine problem sets, I'll just not do the tenth and final problem set."

◉ "I spent four hours on this problem set, but I really wanted to figure out question #2."

○ "Will this be on the test?"

○ "What do I need to get on the final to get an A- in this course?"

✔

Explanation
Most of these statements reflect an interest in doing well in the course, but not necessarily mastering the material. Only the statement about figuring out question #2 indicates an interest in mastery, perhaps because the material is interesting or perhaps because the student feels satisfaction in solving a tough problem.

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Question 6

1/1 point (graded)

Which of the following assessment strategies are likely to reduce strategic learning behaviors by students and foster their motivation to learn? Choose all that apply.

- ☑ Providing students with frequent opportunities for practice and formative assessment prior to a mid-term exam.

- ☐ Only awarding A grades to the top 15% of students in a course.

- ☐ Based the students' grades entirely on one, end-of-semester exam.

- ☑ Allowing students to continue taking different versions of a quiz until they answer all the questions on a version correctly.

✔

Explanation
Making students compete with each other for grades will focus their attention on their performance in a course, not on mastering the material. Likewise for based a student's grade on a single, high-stakes assessment. On the other hand, low-stakes assessments help students learn and communicate to them that learning is indeed the goal. In his book Cheating Lessons, James Lang writes, "Nothing says mastery—seriously, nothing at all—like telling a learner that they get to keep practicing and trying until they get it right."

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Question 7

1/1 point (graded)

A swim instructor teaching a child to swim focuses on breathing and kicking techniques, but neglects to provide advice on how hands should be positioned during strokes. This oversight is likely the result of the instructor being in which stage of mastery?

○ Conscious competence

○ Conscious incompetence

◉ Unconscious competence

○ Unconscious incompetence

✔

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