Active Learning Technique

Steps

1. Select the questions on the exam where the student's performance indicated a need for focused attention.

2. Students are asked to find the exam question, and discuss with their neighbor or neighbors, the logical progression of solving the problem. Students focus on the logical progression not on whether the student performed well but focusing on the problem-solving techniques used to solve problems during class.

3. After 3 to 5 minutes of discussions, students are asked questions to help guide the learning/metacognitive process. The first question is always what topic is the question assessing. Then explain the analysis of the topic being assessed.

4. Students are given an opportunity to ask questions about the concepts or procedural mechanisms to solve the problem.

5. After answering questions that have arisen from the discussion, students are given a couple of minutes to work on the solution to the problem. The students are instructed not to look at their answers but to solve the problem as if the problem was a new problem. Students are instructed to discuss the logical progression used to solve the problem.

6. Students are asked to enter the answer they have obtained using the i-clicker response system.

7. Students are shown the correct answer and the logical process to solve the problem is offered.

8. Students have reassessed the questions on the next exam (2 to 3 weeks later), and data is gathered to prove retention. Some questions are also used on the final exam to examine long-term retention.

9. Data used to identify topics that students continue to struggle with to examine pedagogical methods to aid in student learning of the specific topic.

Benefit to Student

1. Changes the student's view of assessments and the role of assessments.

2. Student's engage in discussion of ideas to solve problems starting with identifying the topic being assessed.

3. Changing students' focus from getting answers to learning material.

4. Increasing knowledge retention.

Showcase Data Request and References

Assessments to Develop Metacognitive Skills

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Teaching Modality
Face-to-Face