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The Question:

Will students perform better on assessments when given practice problems that involve higher order thinking questions or with rote, procedural thinking questions?
The Hypothesis:

Student scores will be higher when given practice with higher order thinking questions than they will when given procedural questions.
The Procedure:

• Students were split into 2 groups
• First group was given higher order questions to practice for two days while second group was given procedural questions over the same content
• Assessment given after two days
• Groups switch after two days
• Second assessment given
The Results: Group 1

**Procedural Thinking Assignments:**

- Homework Average Day 1: 80.74%
- Homework Average Day 2: 82.72%
- Assessment 1 Average: 66.51%

**Higher Order Thinking Assignments:**

- Homework Average Day 3: 62.19%
- Homework Average Day 4: 65.19%
- Assessment 2 Average: 77.02%
The Results: Group 2

**Higher Order Thinking Assignments:**

- Homework Average Day 1: 46.19%
- Homework Average Day 2: 71.17%
- Assessment 1 Average: 76.29%

**Procedural Thinking Assignments:**

- Homework Average Day 3: 58.65%
- Homework Average Day 4: 62.21%
- Assessment 2 Average: 69.80%
The Conclusion:

Students performed up to 10% higher on assessments when given practice including higher order thinking questions.
Thank You!

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