TeachME Professional Development

Transforming Math Education and Instruction

1. How do implicit biases affect math education for Black and Latino students?

A. Teachers are more likely to offer Black and Latino students more encouragement and feedback.
B. Black and Latino students are less likely to be recommended for advanced math courses, even if they show the same proficiency as their peers.
C. Teachers automatically assume that all students can equally access advanced math resources.
D. Teachers provide Black and Latino students with more opportunities for rigorous problem-solving.

---

2. Timed math tests can be counterproductive because:

A. They encourage flexible thinking and reasoning.
B. They improve students' ability to reflect on their learning.
C. They create anxiety and discourage methodical problem-solving.
D. They help students build confidence in their math skills.

---

3. How can technology help address disparities in math education?

A. By providing a one-size-fits-all solution for all students.
B. By allowing students to engage in passive learning without teacher involvement.
C. By reducing the need for in-class instruction and teacher-student interaction.
D. By offering personalized learning experiences that allow students to progress at their own pace.

---

4. Why is relying solely on verbal explanations an ineffective math strategy?

A. Students require visualization to fully grasp number relationships.
B. Verbal explanations are more engaging than hands-on activities.
C. Math is best learned through listening rather than seeing.
D. Teachers should limit the use of visual tools to avoid confusion.

---

5. What is a key characteristic of Student-Centered Math Instruction?

A. Focusing only on individual practice
B. Encouraging students to memorize mathematical procedures
C. Encouraging collaborative discussions and student discourse
D. Relying solely on teacher-directed instruction

---

6. Which of the following is an example of an ineffective strategy in teaching math facts?

A. Encouraging students to use visual aids to understand number relationships.
B. Having students discover multiplication patterns by working with groups of objects.
C. Teaching math facts in strict numerical order without considering connections between numbers.
D. Helping students decompose numbers to simplify problems.

---

7. What is one advantage of project-based learning (PBL) in math education?

A. It focuses solely on memorizing mathematical rules
B. It allows students to apply math concepts to real-world problems
C. It limits the need for collaboration
D. It restricts the use of technology in learning

---

8. Which of the following is a result of the culture of low expectations and tracking in math education for underserved students?

A. Tracking provides opportunities for students to engage in cognitively demanding tasks..
B. Students are more likely to engage with advanced math topics when they are grouped with students of similar abilities
C. Tracking ensures that all students receive equal exposure to challenging mathematical content and that they can work with other students of varying abilities.
D. Students are often limited to less rigorous mathematical concepts, reducing their chances of developing critical problem-solving skills.

---

9. What role does social interaction play in student-centered math learning?

A. It promotes deeper reasoning and problem-solving through multiple perspectives
B. It is secondary to individual cognitive development
C. It is irrelevant to the learning process
D. It discourages collaboration among students

---

10. A teacher only teaches subtraction by turning it into an addition problem (e.g., 15 - 9 becomes 9 + ? = 15). What is the biggest limitation of this approach?

A. It encourages students to use too many different strategies.
B. It limits students' ability to develop flexible mathematical thinking
C. It strengthens their understanding of addition but not subtraction.
D. It is an unnecessary approach because students should memorize facts

---