

Certain types of thinking are best suited to certain types of problem-solving

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A new study in the journal *Mind, Brain, and Education* reveals that certain types of thinking are best suited to solving certain types of problems. Specifically, geometry problems are best solved by a combination of verbal and spatial strategies, but not shape-based imagery strategies.

Researchers investigated whether middle school students solved geometry problems more successfully than their peers when they were provided with clues consistent with their own style of thinking. The cognitive styles that were identified and the related clues were verbal, spatial, and shape-based. They found that regardless of the type of clue provided, spatial and verbal thinking styles were useful for solving the geometry problems, while shape-based thinking was much less effective.

The study shows that geometry problems are solved most successfully through certain styles of thinking.

"Our research may have an impact on the teaching of geometry, and perhaps mathematics in general," the authors conclude. "Specifically, teaching students how to think spatially and manipulate and hold in mind images may improve their performance in geometry class. Thus, it is important for students to consider other thinking styles than approaches usually taught in most introductory geometry classes in the U.S."

Source: Wiley

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