

## The BIG Nine Instructional Strategies

- Meta-analysis studies to determine the instructional strategies that have the highest probability of enhancing student achievement for all students, in all subject areas, and across all grades.
- Results are reported in effect size, a unit of measurement. Effect size is the increase or decrease in achievement of the group of students who were exposed to the specific instructional technique in standard deviation units. Effect size can be translated into percentile gains and interpreted in terms of impact.
- The effect size relates to the impact on student learning.

### Effect Size = Impact

.20	Small
.50	Medium
.80	Large

	<b>The BIG Nine</b>	<b>Effect Size</b>
1.	Identifying similarities and differences Comparing, Classifying, Creating metaphors & analogies	1.61
2.	Summarizing and notetaking Vocabulary and Comprehension Reciprocal teaching	1.00
3.	Reinforcing effort and providing recognition Including rewards and praise	.80
4.	Homework and practice	.77
5.	Nonlinguistic representations Graphic organizers	.75
6.	Cooperative learning	.73
7.	Setting objectives and providing feedback Goal setting, Corrective feedback, Rubrics	.61
8.	Generating and testing hypotheses Inductive & deductive thinking, Problem solving, Decision making, Investigation, Invention, Experimental inquiry, Systems analysis	.61
9.	Cues, questions, and advance organizers Higher level questions/Discussion Advance organizers	.59
**	Vocabulary	
**	Exposure to details	
**	Dramatic instruction	
**	Organizing ideas	
**	Argumentation/Taking a position	

**Reference:** Marzano, R., Pickering, D., & Pollock, J. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria, VA: ASCD.

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