



Read about the ten, research-based strategies for instruction.

Strategies for Instruction

Barak Rosenshine has spent forty years researching the practices of effective teaching. He wrote an article for *American Educator* based on the work in his *Principles of Instruction* book. Access that article here to learn the research-based strategies all teachers should know and how to implement them in the classroom.

<https://www.aft.org/sites/default/files/periodicals/Rosenshine.pdf>.

Principles of Instruction

Research-Based Strategies That All Teachers Should Know



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BY BARAK ROSENSHINE

This article presents 10 research-based principles of instruction, along with suggestions for classroom practice. These principles come from three sources: (a) research in cognitive science, (b) research on master teachers, and (c) research on content experts. Each is briefly explained below.

A: Research in cognitive science: This research focuses on how our brains acquire and use information. This research also provides suggestions on how we might overcome the limitations of our working memory (i.e., the mental “space” in which thinking occurs) when learning new material.

B: Research on the classroom practices of master teachers: Master teachers are those teachers whose classrooms made the highest gains on achievement tests. In a series of studies, a wide range of teachers were observed as they taught, and the investigators coded how they presented new material, how and whether they checked for student understanding, the types of support they provided to their students, and a number of other instructional activities. By also gathering student achievement data, researchers were able to identify the ways in which the more and less effective teachers differed.

C: Research on cognitive supports to help students learn complex tasks: Effective instructional procedures—such as thinking aloud, providing students with scaffolds, and providing students with models—come from this research.

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Even though these are three very different bodies of research, there is *no conflict at all* between the instructional suggestions that come from each of these three sources. In other words, these three sources supplement and complement each other. The fact that the instructional ideas from three different sources supplement and complement each other gives us confidence in the validity of these findings.

Helping a novice develop strong, readily accessible background knowledge. It's important that background knowledge be readily accessible, and this occurs when knowledge is well rehearsed and tied to other knowledge. The most effective teachers ensured that their students efficiently acquired, rehearsed, and connected background knowledge by providing a good deal of instructional support. They provided this support by teaching new material in manageable amounts, modeling, guiding student practice, helping students when they made errors, and providing for sufficient practice and review. Many of these teachers also went on to experiential, hands-on activities, but they always did the experiential activities *after*, not before, the basic material was learned.

The following is a list of some of the instructional principles that have come from these three sources. These ideas will be described and discussed in this article:

- Begin a lesson with a short review of previous learning.¹
- Present new material in small steps with student practice after each step.²
- Ask a large number of questions and check the responses of all students.³
- Provide models.⁴
- Guide student practice.⁵
- Check for student understanding.⁶
- Obtain a high success rate.⁷
- Provide scaffolds for difficult tasks.⁸
- Require and monitor independent practice.⁹
- Engage students in weekly and monthly review.¹⁰

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