Research Roundup

Effective Test Prep
What Do We Know About Effective Test Prep?

Spring is upon us and testing season is around the corner. As you’re gearing up to prepare students to take their annual assessments, take a look at this month’s research and resources about what is (and what is not) beneficial to kids when it comes to test prep.
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Big Takeaways About Test Prep

- Quality instruction throughout the school year is key to good test scores.

- Strategies that tap into higher order cognitive and critical thinking skills (such as asking “why” questions, and having students explain their reasoning) help students learn more and retain information better in the long-term.

- Taking at least one full-length practice test helps students tackle test anxiety and become “test-wise”.

- As the test approaches, the most effective test prep focuses on reducing student stress and helping students understand who they are as test takers.
KEY RESEARCH
Improving Students’ Learning with Effective Learning Techniques: Promising Directions from Cognitive and Educational Psychology

Over the years, students learn many techniques for studying and taking tests. While some may be effective, others are not and can distract students from engaging in strategies that actually do improve their learning. This research paper reviews common techniques based on the research, providing clues to what kind of test prep might be most beneficial to students.

Big Takeaways:

Some highlights from their findings include:

- Highlighting, underlining, rereading, and creating catchy mnemonic devices do little to boost performance on exams.
- Elaborative interrogation (prompting students to answer “why” questions) and having students explain their reasoning can lead to better learning.
- Practice testing (such as practicing recall of information, completing practice problems, or completing practice tests) has been shown to increase learning.
- Distributed practice (spreading out studying over time) is more effective for long-term retention than simply cramming for a test.
Counterfactual Thinking and the First Instinct Fallacy

When it comes to testing, many people believe in “going with your gut” and avoiding changing answers on multiple choice tests. However, researchers at the University of Illinois at Urbana-Champaign walk through dozens of studies demonstrating that answer changes are often positive, and they discuss their own research that corroborates these previous findings.

**Big Takeaway:**
Students often switch answers after they have thought more critically about the problem at hand, and more often than not, more thinking results in more correct answers.
Test-taking Strategies of High and Low Mathematics Achievers

What do high achieving students do differently? Researchers at the University of Nevada Las Vegas conducted interviews with high school students to determine what test prep and test taking strategies students used to prepare for their Algebra exam. In their research, they found that high achievers were not only more likely to use cognitive strategies to prepare for Exams (such as reviewing, outlining, solving, checking, and others), but they were more aware that they were engaging in these cognitive exercises than were low achievers.

**Big Takeaway:**

In this study, students who engaged in cognitive strategies to prepare for their Algebra exam and were aware that they were doing so tended to perform better on the exam.
ACT scores are lower in schools where teachers use a lot of class time for test prep, say researchers at the UChicago Consortium on School Research. The Consortium has spent years trying to crack the code about what it takes to get students ready for college and how to improve ACT scores, and their research shows little evidence that intensive test prep leads to better test scores.

**Big Takeaway:**
What variables do predict higher test scores according to the Consortium research?
- Good grades
- Schools that emphasize preparation for college
- Challenging instruction
- Students taking at least one full-length practice test
KEY RESOURCES
How and How Not to Prepare Students for the New Tests

In a recent article, Timothy Shanahan provides five useful instructional strategies to help students become master readers that go beyond simply taking practice tests - a skillset critical for success on the ELA exams.

**These strategies include:**

- Having students read extensively within instruction.
- Having students read increasing amounts of text with little guidance or support.
- Making sure the texts are challenging.
- Having students explain their answers and use the text to support their answers.
- Engaging students in writing about text.