

# Research Based Strategies for the Classroom

## Part #5 - Homework and Practice

### Introduction

Homework and practice are related, connected by the context when students are learning on their own and applying new knowledge. Effective teachers approach this kind of learning experience as any other—matching the planned activity to the learning goal. Research on homework indicates that it should be approached not as an afterthought to the school day, but as a focused strategy for increasing understanding. Knowing which of the type of homework is needed helps teachers design appropriate homework assignments.

Practice means students are engaged in applying new learning, often repeatedly. The goal of practice is for students to get as close to mastery as possible. Research on homework and practice answers important questions: When should students time their practice? How many skills should students practice at once? How can teachers ensure a strong connection between memorization and understanding? How much practice is necessary for mastery? Effective student practice is key to student achievement.

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### Key Research Findings

- Grade level is important when teachers assign homework. Impact of homework on achievement increases as students move through the grades (Cooper, 1989, a, b). At the high school level, for every 30 additional minutes of homework completed daily, a student's GPA can increase up to half a point (Keith, 1992). Elementary students should be assigned homework to establish good learning and study habits (Cooper, 1989; Cooper, Lindsay, Nye, & Greathouse, 1998; Gorges & Elliot, 1999).
- Teachers should assign appropriate homework at instructional levels that match students' skills and provide positive consequences for homework completion (Rademacher, Deshler, Schumacher, & Lenz, 1998; Rosenberg, 1989).
- A survey of teachers of students with learning disabilities found that 80 percent of teachers regularly assigned homework, but few matched the tasks to students' skills and provided feedback or positive consequences for homework performance (Salend & Schliff, 1989).
- Students should receive feedback on their homework. Student achievement can vary based on the kind of feedback provided by the teacher (Walberg, 1999). Grading homework is helpful, but homework in which a teacher has embedded instructive comments has the greatest effect on learning.

- Homework assignments provide the time and experience students need to develop study habits that support learning. They experience the results of their effort as well as the ability to cope with mistakes and difficulty (Bempechat, 2004).
- Mastery requires focused practice over days or weeks. After only four practice sessions students reach a halfway point to mastery. It takes more than 24 more practice sessions before students reach 80 percent mastery. And this practice must occur over a span of days or weeks, and cannot be rushed (Anderson, 1995; Newell & Rosenbloom, 1981).
- Teachers in the United States tend to compress many skills into practice sessions and instructional units. Students learn more when allowed to practice fewer skills or concepts, but at a deeper level (Healy, 1990).
- Complex processes should be broken down into smaller bits, or skills, which should be taught with time allotted for student practice and adaptation (Marzano, Pickering, & Pollock, 2001).
- Parent involvement in homework can hinder student learning (Balli, 1998; Balli, Demo, & Wedman, 1997, 1998; Perkins & Milgram, 1996). Appropriate parental involvement facilitates homework completion.

## Implementation

Appropriate homework and well-designed student practice will increase student learning. A few key changes in practice may make a significant difference in student achievement by increasing the positive effects. Research suggests ideas for planning homework and activities to support practice:

- 1. Understand the four types of homework.** Know when and why to have students practice:
  - a. Memorization of basic rules, algorithms, or laws so the skill becomes rote.
  - b. Increase in skill speed, used for improving students' abilities to apply these skills in more complex problem solving.
  - c. Deepening understanding of a concept—providing students time to read further, elaborating on a new idea and expanding their understanding.
  - d. Preparation for the following day's learning, such as an advance organizer or cue to increase readiness for new information.
- 2. Match the right type to the goal.** Assign the appropriate homework type to meet the learning goal to make homework a more focused learning experience.
- 3. Assign the right level of homework.** Homework assignments should be at the instructional level that matches students' skills.
- 4. Assign the right amount of homework time.** A good rule of thumb is to multiply the grade x 10 to approximate the right amount of minutes per night for students.
- 5. Apply consistent consequences.** Provide positive recognition for homework completion, and appropriate consequences for lack of completion.
- 6. Recognize student uniqueness.** Students need time to adapt and shape what they are learning as they practice. As they practice, given time, they will incorporate the new skill into a knowledge base of their own, deepening understanding.

**7. Provide clear homework policies.** Create and communicate a homework policy at the school level. Policies developed in individual classrooms may communicate a mixed message to parents, and create confusion and frustration. Include expectations, consequences, guidelines, and helpful tips in school homework policies.

**8. Ask parents to facilitate homework completion, not teach content.** Communicate ways that families can support homework. Parents should provide a consistent time and place in the home for children to complete homework. Help parents understand that they are not expected to be content experts. If a student needs help with content, that's a sign that the homework assignment may be too difficult.

**9. Homework should serve a clear purpose.** Make the goal of a homework assignment explicit and clear to everyone, including students.

**10. Provide appropriate feedback.** Effective feedback corrects misunderstanding, validates process, and highlights errors in thinking.

**11. Provide timely feedback.** Student learning improves with timely feedback. It's best to provide constructive feedback within hours or a day after students complete an assignment.

**12. Create support structures for homework.** Journals, trackers, and other tools help students organize assignments and support communication between student, teacher, and parents.

## Additional Resources

The National PTA provides information for parents about homework as part of its campaign, "100 Ways to Know More. Do more."

<http://www.pta.org/parentinvolvement/adCouncil/homework.asp>

Increasing Student Engagement and Motivation: From Time-on-Task to Homework is a publication of the Northwest Regional Educational Laboratory that includes a synthesis of research and vignettes from schools in the Northwest region.

<http://www.nwrel.org/request/oct00/index.html>

Teachers Involve Parents in Schoolwork is a research-based program to effectively involve parents in their children's education.

<http://spearfish.k12.sd.us/west/Specials/Penny/Teacher%20Involve/overview.htm>

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