

HOMWORK AND PRACTICE

IDENTIFYING SIMILARITIES
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SUMMARIZING AND
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REINFORCING EFFORT AND
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**HOMWORK AND
PRACTICE**

NONLINGUISTIC
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"I hate homework. Why can't we just learn at school and be done with it? I know how to do these problems, and I've shown that I understand them. So, why do I have to do 25?" Jeff had expressed this point of view many times before, but this time his mother had an answer.

"At Back-to-School night, your teachers explained some things about homework to us and went over what they see as the parent's job. Let me see if I get this right. If they asked you to do 25 problems, you are probably supposed to practice in order to increase your accuracy and speed. So it's probably not a good idea to sit there in front of the TV while you do the problems."

Jeff's mother also remembered some of the tips the parents were given for helping students with their homework. "OK. Here is the kitchen timer. When I say 'Go,' do the first five problems and yell 'Stop' when you finish." For the next 30 minutes, Jeff charted and tried to beat his time as he did each set of 5 problems, making sure that he also attended to being accurate. He had to admit that the time flew by and that it was kind of fun.

"Your teacher will love it if you hand in your chart with the completed problems," Jeff's mom suggested. In fact, Jeff's teacher liked it so much that the students' speed and accuracy charts became the focus of the teacher's feedback whenever the goal was to practice a skill.

Homework and practice are instructional techniques that are well known to teachers. Both provide students with opportunities to deepen their understanding and skills relative to content that has been initially presented to them.

Research and Theory on Homework

It is no exaggeration to say that homework is a staple of U.S. education. By the time students reach the middle grades, homework has become a part of their lives. The reason commonly cited for homework makes good sense: It extends learning opportunities beyond the confines of the school day. This might be necessary because "schooling occupies only about 13 percent of the waking hours of the first 18 years of life," which is less than the amount of time students spend watching television (Fraser, Walberg, Welch, & Hattie, 1987, p. 234).

Figure 5.1 shows some of the research findings on homework.

We have found four generalizations that can guide teachers in the use of homework.

1. The amount of homework assigned to students should be different from ele-

mentary to middle school to high school. One of the controversies surrounding homework is whether it is an effective learning tool for students at the elementary level. This first became an issue as a result of the findings of a meta-analysis conducted by researcher Harris Cooper (1989 a, b). After a review of the research up to 1988, Cooper reported the following effect sizes:

Grades 4-6:	ES = .15
Grades 7-9:	ES = .31
Grades 10-12:	ES = .64

Whereas homework in high school produces a gain of about 24 percentile points, homework in the middle grades produces a gain of only 12 percentile points. What was most striking in Cooper's finding is that homework had a relatively small effect—a percentile gain of 6 points—on student achievement at grades 4-6. This finding has led some to conclude that elementary students should not be assigned any home-

FIGURE 5.1

Research Results for Homework

Synthesis Study	Focus	No. of Effect Sizes (ESs)	Ave. ES	Percentile Gain
Paschal, Weinstein, & Walberg, 1984	General effects of homework	81	.36	14
Graue, Weinstein, & Walberg, 1983	General effects of homework	29	.49	19
Hattie, 1992	General effects of homework	110	.43	1
Ross, 1988	General effects of homework	53	.65	24

work. It is important to note that since Cooper's meta-analysis, there have been a number of studies (some of them conducted by Cooper) indicating that homework does produce beneficial results for students in grades as low as 2nd grade (see Cooper, Lindsay, Nye, & Greathouse, 1998; Cooper, Valentine, Nye, & Lindsay, 1999; Good, Grouws, & Ebmeier, 1983; Gorges & Elliott, 1995; Rosenberg, 1989). In fact, even though Cooper found little effect for homework for students at the elementary level in his 1989 (a and b) report, he still recommended homework for elementary students:

First, I recommend that elementary students be given homework even though it should not be expected to improve test scores. Instead, homework for young children should help them develop good study habits, foster positive attitudes toward school, and communicate to students the idea that learning

takes work at home as well as at school (1989b, p. 90).

Given the findings in recent years that homework does positively influence the achievement of elementary students and the 1989 (a and b) endorsement by Cooper, even though his synthesis of the research at that time did not show a relationship between elementary school homework and achievement, it is safe to conclude that students in grades from, at least 2nd and beyond, should be asked to do *some* homework.

This said, it is also important to realize that students at lower grade levels should be given far less homework than students at higher grade levels. The critical question is how much homework is the *right amount* of homework. Unfortunately, there is no clear answer on this point. Figure 5.2 presents recommendations from various studies.

FIGURE 5.2
Recommended Total Minutes Per Day for Homework

Grade Level	Pennsylvania Dept. of Education, 1973	Leone & Richard, 1989	Bond & Smith, 1966	Strang, 1975	Keith, 1982	Tymms & Fitz-Gibbs, 1992
Primary	30		20-29	10		
Upper Elementary	45-90		30-40	40*		
Middle School / Jr. High School	90-120	50	50	60*		
High School	120-180			120	60*	60

* These numbers are estimates, based on the author's comments.

Finally, even though there is certainly a practical (and ethical) limit to the amount of homework that should be assigned to students at the high school level, the more homework students do, the better their achievement. Specifically, Keith's data indicate that for about every 30 minutes of "additional" homework a student does per night, his or her overall grade point average (GPA) increases about half a point. This means that if a student with a GPA of 2.00 increases the amount of homework she does by 30 minutes per night, her GPA will rise to 2.50.

2. Parent involvement in homework should be kept to a minimum. It is probably safe to say that many parents assume that they should help their children with homework. In fact, some districts have written homework policies articulating how parents should be involved (Roderique, Pulloway, Cumblad, & Epstein, 1994). While it is certainly legitimate to inform parents of the homework assigned to their children, it does not seem advisable to have parents help their children with homework. Specifically, many studies show minimal and even somewhat negative effects when parents are asked to help students with homework (see Balli, 1998; Balli, Demo, & Wedman, 1998; Balli, Wedman, & Demo, 1997; Perkins & Milgram, 1996). This does not mean that parents should not help "facilitate" homework, as demonstrated by Jeff's mother in the vignette introducing this chapter. Parents

should be careful, however, not to solve content problems for students.

3. The purpose of homework should be identified and articulated. Not all homework is the same. That is, homework can be assigned for different purposes, and depending on the purpose, the form of homework and the feedback provided students will differ. Two common purposes for homework are (1) practice and (2) preparation or elaboration (see Foyle, 1985; Foyle & Bailey, 1988; Foyle, Lyman, Tompkins, Perne, & Foyle, 1990). When homework is assigned for the purpose of practice, it should be structured around content with which students have a high degree of familiarity. For example, if students are asked to practice a new skill they have learned in class via homework, they should be fairly familiar with that skill. Practicing a skill with which a student is unfamiliar is not only inefficient, but might also serve to habituate errors or misconceptions.

A second general purpose for homework is to prepare students for new content or have them elaborate on content that has been introduced. For example, a teacher might assign homework to have students begin thinking about the concept of the cell prior to systematically studying it in class. Similarly, after that concept of the cell has been introduced, the teacher might assign homework that asks students to elaborate on what they have learned. In both of these situations, it is not necessary that students have an in-depth understanding of the content (as is the case when homework is used for practice).