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Special Topic / The Case For and Against Homework

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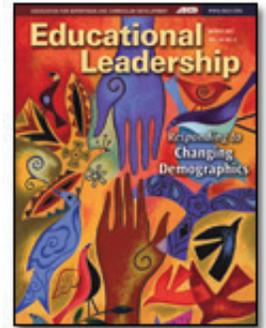
Teachers should not abandon homework. Instead, they should improve its instructional quality.

Homework has been a perennial topic of debate in education, and attitudes toward it have been cyclical (Gill & Schlossman, 2000). Throughout the first few decades of the 20th century, educators commonly believed that homework helped create disciplined minds. By 1940, growing concern that homework interfered with other home activities sparked a reaction against it. This trend was reversed in the late 1950s when the Soviets' launch of *Sputnik* led to concern that U.S. education lacked rigor; schools viewed more rigorous homework as a partial solution to the problem. By 1980, the trend had reversed again, with some learning theorists claiming that homework could be detrimental to students' mental health. Since then, impassioned arguments for and against homework have continued to proliferate.

We now stand at an interesting intersection in the evolution of the homework debate. Arguments against homework are becoming louder and more popular, as evidenced by several recent books as well as an editorial in *Time* magazine (Wallis, 2006) that presented these arguments as truth without much discussion of alternative perspectives. At the same time, a number of studies have provided growing evidence of the usefulness of homework when employed effectively.

The Case for Homework

Homework is typically defined as any tasks "assigned to students by school teachers that are meant to be carried out during nonschool hours" (Cooper, 1989a, p. 7). A number of synthesis studies have been conducted on homework, spanning a broad range of methodologies and levels of specificity (see fig. 1). Some are quite general and mix the results from experimental studies with correlational studies.



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FIGURE 1. Synthesis Studies on Homework

Synthesis Study	Focus	Number of Effect Sizes	Average	Percentil Gains
Graue, Weinstein, &Walberg, 1983 ¹	General effects of homework	29	.49	19
Bloom, 1984	General effects of homework	—	.30	12
Paschal, Weinstein, & Walberg, 1984 ²	Homework versus no homework	47	.28	11
Cooper, 1989a	Homework versus no homework	20	.21	8
Hattie, 1992; Fraser, Walberg, Welch, & Hattie, 1987	General effects of homework	110	.43	17
Walberg, 1999	With teacher comments	2	.88	31
	Graded	5	.78	28
Cooper, Robinson, & Patall, 2006	Homework versus no homework	6	.60	23

Note: This figure describes the eight major research syntheses on the effects of homework published from 1983 to 2006 that provide the basis for the analysis in this article. The Cooper (1989a) study included more than 100 empirical research reports, and the Cooper, Robinson, and Patall (2006) study included about 50 empirical research reports. Figure 1 reports only those results from experimental/control comparisons for these two studies.

¹ Reported in Fraser, Walberg, Welch, & Hattie, 1987.

² Reported in Kavale, 1988.

Two meta-analyses by Cooper and colleagues (Cooper, 1989a; Cooper, Robinson, & Patall, 2006) are the most comprehensive and rigorous. The 1989 meta-analysis reviewed research dating as far back as the 1930s; the 2006 study reviewed research from 1987 to 2003. Commenting on studies that attempted to

examine the causal relationship between homework and student achievement by comparing experimental (homework) and control (no homework) groups, Cooper, Robinson, and Patall (2006) noted,

With only rare exceptions, the relationship between the amount of homework students do and their achievement outcomes was found to be positive and statistically significant. Therefore, we think it would not be imprudent, based on the evidence in hand, to conclude that doing homework causes improved academic achievement. (p. 48)

The Case Against Homework

Although the research support for homework is compelling, the case against homework is popular. *The End of Homework: How Homework Disrupts Families, Overburdens Children, and Limits Learning* by Kralovec and Buell (2000), considered by many to be the first high-profile attack on homework, asserted that homework contributes to a corporate-style, competitive U.S. culture that overvalues work to the detriment of personal and familial well-being. The authors focused particularly on the harm to economically disadvantaged students, who are unintentionally penalized because their environments often make it almost impossible to complete assignments at home. The authors called for people to unite against homework and to lobby for an extended school day instead.

A similar call for action came from Bennett and Kalish (2006) in *The Case Against Homework: How Homework Hurting Our Children and What We Can Do About It*. These authors criticized both the quantity and quality of homework. They provided evidence that too much homework harms students' health and family time, and they asserted that teachers are not well trained in how to assign homework. The authors suggested that individuals and parent groups should insist that teachers reduce the amount of homework, design more valuable assignments, and avoid homework altogether over breaks and holidays.

In a third book, *The Homework Myth: Why Our Kids Get Too Much of a Bad Thing* (2006a), Kohn took direct aim at the research on homework. In this book and in a recent article in *Phi Delta Kappan* (2006b), he became quite personal in his condemnation of researchers. For example, referring to Harris Cooper, the lead author of the two leading meta-analyses on homework, Kohn noted,

A careful reading of Cooper's own studies . . . reveals further examples of his determination to massage the numbers until they yield something—anything—on which to construct a defense of homework for younger children. (2006a, p. 84)

He also attacked a section on homework in our book *Classroom Instruction that Works* (Marzano, Pickering, & Pollock, 2001).

Kohn concluded that research fails to demonstrate homework's effectiveness as an instructional tool and recommended changing the “default state” from an expectation that homework *will* be assigned to an expectation that homework *will not* be assigned. According to Kohn, teachers should only assign homework when they can justify that the assignments are “beneficial” (2006a, p. 166)—ideally involving students in activities appropriate for the home, such as performing an experiment in the kitchen, cooking, doing crossword puzzles with the family, watching good TV shows, or reading. Finally, Kohn urged teachers to involve students in deciding what homework, and how much, they should do.

Some of Kohn's recommendations have merit. For example, it makes good sense to only assign homework that is beneficial to student learning instead of assigning homework as a matter of policy. Many of those

who conduct research on homework explicitly or implicitly recommend this practice. However, his misunderstanding or misrepresentation of the research sends the inaccurate message that research does not support homework. As Figure 1 indicates, homework has decades of research supporting its effective use. Kohn's allegations that researchers are trying to mislead practitioners and the general public are unfounded and detract from a useful debate on effective practice.¹

The Dangers of Ignoring the Research

Certainly, inappropriate homework may produce little or no benefit—it may even decrease student achievement. All three of the books criticizing homework provide compelling anecdotes to this effect. Schools should strengthen their policies to ensure that teachers use homework properly.

If a district or school discards homework altogether, however, it will be throwing away a powerful instructional tool. Cooper and colleagues' (2006) comparison of homework with no homework indicates that the average student in a class in which appropriate homework was assigned would score 23 percentile points higher on tests of the knowledge addressed in that class than the average student in a class in which homework was not assigned.

Perhaps the most important advantage of homework is that it can enhance achievement by extending learning beyond the school day. This characteristic is important because U.S. students spend much less time studying academic content than students in other countries do. A 1994 report examined the amount of time U.S. students spend studying core academic subjects compared with students in other countries that typically outperform the United States academically, such as Japan, Germany, and France. The study found that “students abroad are required to work on demanding subject matter at least twice as long” as are U.S. students (National Education Commission on Time and Learning, 1994, p. 25).

To drop the use of homework, then, a school or district would be obliged to identify a practice that produces a similar effect within the confines of the school day without taking away or diminishing the benefits of other academic activities—no easy accomplishment. A better approach is to ensure that teachers use homework effectively. To enact effective homework policies, however, schools and districts must address the following issues.

Grade Level

Although teachers across the K–12 spectrum commonly assign homework, research has produced no clear cut consensus on the benefits of homework at the early elementary grade levels. In his early meta-analysis Cooper (1989a) reported the following effect sizes (p. 71):

Grades 4–6: ES = .15 (Percentile gain = 6)

Grades 7–9: ES = .31 (Percentile gain = 12)

Grades 10–12: ES = .64 (Percentile gain = 24)

The pattern clearly indicates that homework has smaller effects at lower grade levels. Even so, Cooper (1989b) still recommended homework for elementary students because

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. (p. 90)

The Cooper, Robinson, and Patall (2006) meta-analysis found the same pattern of stronger relationships at the secondary level but also identified a number of studies at grades 2, 3, and 4 demonstrating positive effects for homework. In *The Battle over Homework* (2007), Cooper noted that homework should have different purposes at different grade levels:

For students in *the earliest grades*, it should foster positive attitudes, habits, and character traits; perr appropriate parent involvement; and reinforce learning of simple skills introduced in class.

For students in *upper elementary grades*, it should play a more direct role in fostering improved schoo achievement.

In *6th grade and beyond*, it should play an important role in improving standardized test scores and grades.

Time Spent on Homework

One of the more contentious issues in the homework debate is the amount of time students should spend on homework. The Cooper synthesis (1989a) reported that for junior high school students, the benefits increased as time increased, up to 1 to 2 hours of homework a night, and then decreased. The Cooper, Robinson, and Patall (2006) study reported similar findings: 7 to 12 hours of homework per week producer the largest effect size for 12th grade students. The researchers suggested that for 12th graders the optimu amount of homework might lie between 1.5 and 2.5 hours per night, but they cautioned that no hard-and-fast rules are warranted. Still, researchers have offered various recommendations. For example, Good and Brophy (2003) cautioned that teachers must take care not to assign too much homework. They suggested that

homework must be realistic in length and difficulty given the students' abilities to work independently. Thus, 5 to 10 minutes per subject might be appropriate for 4th graders, whereas 30 to 60 minutes might be appropriate for college-bound high school students. (p. 394)

Cooper, Robinson, and Patall (2006) also issued a strong warning about too much homework:

Even for these oldest students, too much homework may diminish its effectiveness or even become counterproductive. (p 53)

Cooper (2007) suggested that research findings support the common “10-minute rule” (p. 92), which states that all daily homework assignments combined should take about as long to complete as 10 minutes multiplied by the student's grade level. He added that when required reading is included as a type of homework, the 10-minute rule might be increased to 15 minutes.

Focusing on the amount of time students spend on homework, however, may miss the point. A significant proportion of the research on homework indicates that the positive effects of homework relate to the amount of homework that the student *completes* rather than the amount of time spent on homework or th amount of homework actually assigned. Thus, simply assigning homework may not produce the desired effect—in fact, ill-structured homework might even have a negative effect on student achievement. Teache

must carefully plan and assign homework in a way that maximizes the potential for student success (see Research-Based Homework Guidelines).

Parent Involvement

Another question regarding homework is the extent to which schools should involve parents. Some studies have reported minimal positive effects or even negative effects for parental involvement. In addition, many parents report that they feel unprepared to help their children with homework and that their efforts to help frequently cause stress (see Balli, 1998; Corno, 1996; Hoover-Dempsey, Bassler, & Burow, 1995; Perkins & Milgram, 1996).

Epstein and colleagues conducted a series of studies to identify the conditions under which parental involvement enhances homework (Epstein, 2001; Epstein & Becker, 1982; Van Voorhis, 2003). They recommended *interactive* homework in which

- Parents receive clear guidelines spelling out their role.

- Teachers do not expect parents to act as experts regarding content or to attempt to teach the content.

- Parents ask questions that help students clarify and summarize what they have learned.

Good and Brophy (2003) provided the following recommendations regarding parent involvement:

Especially useful for parent-child relations purposes are assignments calling for students to show or explain their written work or other products completed at school to their parents and get their reactions (Epstein, 2001; Epstein, Simon, & Salinas, 1997) or to interview their parents to develop information about parental experiences or opinions relating to topics studied in social studies (Alleman & Brophy, 1998). Such assignments cause students and their parents or other family members to become engaged in conversations that relate to the academic curriculum and thus extend the students' learning. Furthermore, because these are likely to be genuine conversations rather than more formally structured teaching/learning tasks, both parents and children are likely to experience them as enjoyable rather than threatening. (p. 395)

Going Beyond the Research

Although research has established the overall viability of homework as a tool to enhance student achievement, for the most part the research does not provide recommendations that are specific enough to help busy practitioners. This is the nature of research—it errs on the side of assuming that something does not work until substantial evidence establishes that it does. The research community takes a long time to formulate firm conclusions on the basis of research. Homework is a perfect example: Figure 1 includes synthesis studies that go back as far as 60 years, yet all that research translates to a handful of recommendations articulated at a very general level.

In addition, research in a specific area, such as homework, sometimes contradicts research in related areas. For example, Cooper (2007) recommended on the basis of 60-plus years of homework research that teachers should not comment on or grade every homework assignment. But practitioners might draw a different conclusion from the research on providing feedback to students, which has found that providing

“feedback coupled with remediation” (Hattie, 1992) or feedback on “testlike events” in the form of explanations to students (Bangert-Drowns, Kulik, Kulik, & Morgan, 1991) positively affects achievement.

Riehl (2006) pointed out the similarity between education research and medical research. She commented

When reported in the popular media, medical research often appears as a blunt instrument, able to obliterate skeptics or opponents by the force of its evidence and arguments. . . . Yet repeated visits to the medical journals themselves can leave a much different impression. The serious medical journals convey the sense that medical research is an ongoing conversation and quest, punctuated occasionally by important findings that can and should alter practice, but more often characterized by continuing investigations. These investigations, taken cumulatively, can inform the work of practitioners who are building their own local knowledge bases on medical care. (pp. 27–28)

If relying solely on research is problematic, what are busy practitioners to do? The answer is certainly not to wait until research “proves” that a practice is effective. Instead, educators should combine research-based generalizations, research from related areas, and their own professional judgment based on firsthand experience to develop specific practices and make adjustments as necessary. Like medical practitioners, education practitioners must develop their own “local knowledge base” on homework and all other aspects of teaching. Educators can develop the most effective practices by observing changes in the achievement of the students with whom they work every day.

Research-Based Homework Guidelines

Research provides strong evidence that, when used appropriately, homework benefits student achievement. To make sure that homework is appropriate, teachers should follow these guidelines:

Assign purposeful homework. Legitimate purposes for homework include introducing new content, practicing a skill or process that students can do independently but not fluently, elaborating on information that has been addressed in class to deepen students' knowledge, and providing opportunities for students to explore topics of their own interest.

Design homework to maximize the chances that students will complete it. For example, ensure that homework is at the appropriate level of difficulty. Students should be able to complete homework assignments independently with relatively high success rates, but they should still find the assignments challenging enough to be interesting.

Involve parents in appropriate ways (for example, as a sounding board to help students summarize what they learned from the homework) without requiring parents to act as teachers or to police students' homework completion.

Carefully monitor the amount of homework assigned so that it is appropriate to students' age levels and does not take too much time away from other home activities.

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Endnote

¹ For a more detailed response to Kohn's views on homework, see Marzano & Pickering (2007) and Marzano & Pickering (in press).

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