Homework Inoculation And the Limits of Research

Educational research is unlikely to uncover the truth about homework, Mr. Jackson argues. He suggests that, depending on its nature, homework in the elementary grades can have either positive or perversely negative effects on school performance.

BY BRUCE JACKSON

WHY DO so many good teachers throw up their hands at educational research? The exchange over homework research in the March 2007 *Kappan*, which thoroughly muddied the waters around a core educational issue, provides a fine example of what might prompt such a reaction. Short on time and on patience, classroom teachers generally resort to doing whatever makes sense, drawing on the advice of colleagues and their personal experiences as teachers and learners. On the whole, this is not a bad strategy, except when the long-term consequences of teachers' decisions are unknown or counterintuitive, or when teachers are called upon to justify their actions.

When it comes to homework, the commonsense approach is doubly vulnerable, since homework is often a hot-button issue for parents, school boards, and the students themselves, while its long-term consequences extend well beyond the immediate school setting. One might hope for less heat and more light from the experts — perhaps even a nuanced understanding of homework that recognizes its complexity, variability, and potential

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for both positive and negative effects.

Missing from these discussions, and from the vast majority of educational research, is a longitudinal perspective. An exception directly relevant to the homework debates at the high school level is Laurence Steinberg's *Beyond the Classroom*,[1] which, oddly, is rarely cited by either Alfie Kohn or Robert Marzano and Debra Pickering. To my knowledge, there are no comparable efforts to track K-8 students' behavioral patterns over extended time periods in different social and cultural contexts. Such research would be critically important to our mission in the schools, but it is expensive, time-consuming, and not easily reducible to the treatments and effect sizes favored in current "expert" research. The longitudinal view is quite familiar, however, to the "non-expert" parents who labor to support their students' good homework habits in the elementary years, only to watch these habits fall apart in middle or high school. And among teachers, a few of us have managed to job-hop repeatedly, gathering impressions about how the social meanings of things like homework change dramatically between elementary and secondary education.

THE INOCULATION HYPOTHESIS

From this combined elementary/secondary perspective, I would advance a hypothesis about one aspect of long-term homework effects for which there is strong anecdotal evidence but little chance of generating quantitative data anytime soon, particularly in the high-mobility, low-income areas where it matters most. My "inoculation hypothesis" argues that *for a substantial portion of our students, the experience of constantly facing routine homework assignments in the name of developing "good homework habits" during the early elementary years has a perverse effect on later attitudes toward truly important homework.*

Geometry homework. The evidence for this hypothesis comes from personal experience teaching in a variety of fourth- through sixth-grade classrooms and teaching math for the past five years in an urban high school. The hypothesis became particularly compelling in the high school setting as I tried to figure out why promising students in my own geometry classes persistently failed. Every year students entered my classes not fully prepared for the large body of new concepts, vocabulary, skills, and logical principles that are central to a college-prep geometry course. With rare exceptions, the deficiencies were surmountable, provided that these students accepted the need to study and work on sample problems outside of class. But, despite a claimed orientation toward college, many of them failed geometry, in large part because of "homework resistance" that seemed rooted in early elementary school and shaped by adolescent identity pressures.

Occasional missed geometry assignments weren't a big deal in my classes. After all, an unknowable but surely substantial portion of completed homework involved copying from classmates. An additional portion consisted of "homework simulations" with correct answers to odd-numbered problems (which have answers in the back of the book) embellished with jottings that gave the appearance of work. So, like most of my colleagues, I gave credit for homework but based most of a student's grade on tests, quizzes, and in-class projects. Class time was an intense geometry experience for all but the most tuned-out. But since test questions looked remarkably similar to those covered in homework, students who didn't do the homework had trouble passing tests or participating fully in class.

At year's end, out of 90 geometry students in three sections, 38 had completed less than 60% of the assignments. Of these 38, two quite talented students managed to earn a semester grade of C, another three earned D's, and the remaining 33 all earned F's. In contrast, all but a handful of the students who had completed 80% or more of the assignments passed with grades of C or better.

The puzzle. Why would so many students willingly waste a year sitting through geometry class and earn zero credits toward graduation? All had managed to pass algebra, and many even had good attendance in my class. Most had the requisite mathematical ability and would have passed had they spent 40 to 50 minutes daily outside of class on the homework. Free tutoring and homework help were available at lunch and after school, but no one showed up more than once or twice; most never came at all. What were they thinking? Countless frustrating conversations convinced me that most students in this situation can't tell you the real reasons for their behavior, because they themselves don't know. They offer a charming variety of excuses, evasions, defensive maneuvers, *mea culpas*, and doleful expressions, many well practiced from prior confrontations with parents or counselors. Almost all say that to succeed they would need to start doing all their homework. They further insist that they want to be successful. So what's going on that students can't explain to us — or to themselves?

Early homework "habits." The story I've pieced together begins in early elementary school — where homework was once a rarity (fourth-graders in my first teaching job during the 1970s had one or two homework assignments per week!). Serious homework was associated with the upper grades and middle or high school,

when students were judged able to handle greater responsibility for independent work. Late in the 20th century it became fashionable to assign homework earlier and earlier, often in the name of "instilling good homework habits." It may or may not have made much difference to student achievement, but it satisfied the demands of parents, who increasingly associated homework with a rigorous school program.

An unintended consequence of this push for ever-earlier homework was that it gradually took on a different set of associations — what was once a marker of maturity and responsibility has become for many a sign of childhood dependency and submission to adult will. Good boys and girls obediently do their homework; rebellious boys and girls do not. Parents and schools with the necessary will power and resources can ensure that their third-graders *will* do their homework. Most 8- and 9-year-olds, after all, will submit to sufficiently adamant adults, at least for a while. But homework isn't always intrinsically pleasurable, and the seeds of future rebellion are sown. Along with other indignities of childhood, homework has become something to be outgrown. Like broccoli or lima beans, it can be endured until one gains enough size, strength, and mental agility to create persuasive cover stories for what happened to it.

Later homework rebellion. Over time, social pressures mount and identity issues figure ever larger. The regular completion of work assigned by an authority (usually female) is more compatible with female than male stereotypes, and for boys, it can easily become an added threat to an already shaky masculine identity. Girls face pressures to show their independence as well, but at all levels they are more likely than boys to have "good homework habits," along with good manners, well-scrubbed hands, and neat handwriting. Young males in American society are under intense social pressure to show rebellious, risk-taking behavior, and for boys with few positive male role models, the need to establish masculine credentials by rejecting "feminizing" submission to authority is particularly strong. For both genders, peer groups become key factors in setting the boundaries of behavior during early adolescence.

By middle school, the rebellion is in full flower. Passive acceptance of adult authority no longer carries status for either boys or girls. The "regular homework habits" of early childhood might still please teachers and parents, but socially they are often a real liability, inviting negative labels and ridicule: only nerds, grinds, and other social "losers" maintain such "goody-goody" habits. Some students begin completing homework in secret and furtively turning it in; others simply balk. Even moderate zeal around homework risks affecting contact with friends and limiting access to the currency of social interchange: "what's hot" on the Web and in film, TV, video games, music, gossip, and consumer goods. Teachers, meanwhile, overwhelmed by the sheer numbers of daily student contacts, are unable to check all work or follow up individually when homework habits start to falter.

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The corollary drift toward nonessential assignments. An increasing by-product of the rising quantity of homework has been its relegation to the educational margins. Nonessential busywork or "skills review" assignments are easily discounted. Students who complete them may earn praise and better grades, but those who don't rarely face serious consequences.[2] In better schools, students may be kept after class to complete work, but this practice can punish teachers as much as it reinforces good study habits. Over time, students determined to avoid homework discover they can outlast most teachers in a battle of wills. And if homework is mostly busywork, it doesn't much matter. In medicine, inoculation consists of injecting subjects with a weakened form of a disease to stimulate resistance. In education, nonessential assignments are the "weakened form" of the homework virus, stimulating a classic inoculation response.

But inoculation doesn't stop with the students. Their teachers soon discover that they can't afford to make homework critical to their daily lessons. How do you have a smoothly running class if large numbers of students can't fully participate? The logic of this process leads to a self-reinforcing cycle: fewer students doing homework → less classwork based on homework → less homework that matters → even less reason for students to do homework. Once this powerful feedback loop is in place, individual efforts to counter it are often self-defeating. Students still completing homework become more isolated and less able to justify their actions to their friends or themselves. Teachers trying to empha-

size homework face a double load: one lesson plan for those who have done the assignment plus a separate one to keep the rest occupied and out of trouble. How much easier to give up and go with lesson plans that minimize the importance of homework. Teachers, too, are inoculated by failed initiatives.

High school shock. By the time students arrive in high school they have learned a lot about homework, but unless they've made a commitment to pursue the top grades, what they've learned may be diametrically opposed to what we thought we were teaching. "Good homework habits" are now an unhappy memory from early childhood dependency. Obedience to parents and teachers is problematic and rarely practiced outside their immediate presence. Students have furthermore learned that homework is not really important to passing courses, that it's mostly make-work to keep them busy, that nothing serious happens if they don't do it. Finally, except for those in the "brains" crowd, taking homework seriously has become incompatible with their hoped-for social identity. For most students, the prevailing norm is to "get by without showing off," and far too many figure they can get by without doing much homework.[3] Our inoculation has taken — they have well-developed antibodies against the "homework bug."

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EQUITY AND THE POSITIVE POTENTIAL OF HOMEWORK

If this analysis has validity beyond my personal experience and observations, it has significant implications for interpreting homework research as well as for establishing homework policies and practices. The low correlation of homework with academic success at the elementary level may be hiding a much more serious long-term problem. In college-prep high school classes, homework is often the great equalizer, allowing those with weaker academic backgrounds or less native talent to compete successfully with their better-prepared or more gifted peers. Poorly planned homework at the elementary level may seriously undermine this potential and may do so in ways that have their worst consequences for those students most in need of an academic boost. So . . . should we then abolish homework at the elementary level across the board? Unfortunately, it's not that simple.

At the upper socioeconomic levels, parents understandably resent the "excessive" homework demands of many high-achieving elementary schools, arguing that social development and family activities are a better use of time outside school than much of what is assigned by teachers. For families with college traditions and easy access to libraries, the Internet, recreational programs, and the arts, it's a persuasive argument. But for families without these class-based resources, how else but through homework can students catch up academically with their more advantaged peers? Alfie Kohn worries about over-homeworked children "missing out on their childhood."[4] Yet students in the low-income areas where I've worked spend long hours in homes where television, video games, or older siblings are the only babysitters, and outside, the streets are unsafe. If this childhood is to be "protected" from the intrusion of homework, what chance do these students have of matching their middle-class peers in academic proficiency? As Marva Collins admonished her inner-city Chicago pupils, "Unless you are a genius or your daddy is a millionaire, you cannot afford to leave your books here and not do your homework."[5]

While the well educated increasingly protest against "excessive" homework, homework inoculation does its silent damage in low-income schools where academic success and college access are distant dreams. The Education Trust and others concerned about educational equity have long cited the differential access to algebra and other "gateway" courses as evidence of lingering institutional racism or classism in our schools — what the Bush Administration is fond of calling "the soft bigotry of low expectations." But if success in gateway classes is largely determined by the willingness to do required homework, and if low-income students are immersed in social and psychological pressures that make that problematic, it is hard to see how raised expectations that ignore these pressures can have much effect.

Despite the ambiguities of research, carefully planned homework can be a great equalizer at the elementary level as well and need not feed into an inoculation cycle. Some of my own most creative work as a fourth-, fifth-,

and sixth-grade teacher went into developing homework assignments that students actually enjoyed completing. A well-designed home reading program may get students hooked on independent reading and sharply alter patterns of TV and video game usage, encourage visits to local libraries, and build a self-sustaining reading habit that doesn't depend on obedience, tokens, or rewards. Other homework assignments that pay off for students in recognition at school can similarly lead to internalizing the idea that private effort outside of school (or work) can pay off in terms of public success. No one seriously contends that virtuoso performances in music or sports are achieved without extensive practice — why should academic performances be different? Finally, intensive work outside of school on projects that motivate students to pursue high-quality outcomes may not seem like homework at all yet may do far more for building an academic identity than any number of stars, happy faces, or letter grades.

WHAT ABOUT RESEARCH?

What does research tell us about all of this? About the long-term effects of early homework experiences? About the life span of "good homework habits"? About the long-term effects of different types of homework assignments? About the pros and cons of homework incentives or of keeping students in at lunch or recess to complete homework? About the interplay of social and academic pressures during adolescence in our different subcultures? About interactions between school homework expectations and different home cultures and parenting patterns?

Let's be real. On many important questions in education, research is largely silent or has results that apply only to very limited contexts. Expert interpreters of research need to be honest about it. What research has done best so far is to shoot down unwarranted generalizations about homework and blanket assumptions about best practice. Surely it can do more in the future, but for now, let the consumer beware.

In particular, let us use what we know from experience to place the limited conclusions of homework research within the broader picture of schools, communities, private homes, and student development over time. Homework as commonly understood is work done beyond the control or supervision of teachers — a "controlled homework experiment" would be an oxymoron. High school homework is a very different beast from homework in early elementary school; both are directly affected by variables we know to be powerful. In elementary education, major variables include the nature of the assignment, student skill levels, the level of parent involvement, the ability and availability of adults to help, the nature of family relationships, the language(s) spoken at home, the attitudes of parents and family members toward school, and what report card grades are acceptable to parents. In secondary education, parent involvement becomes even more variable, while the student's social identity and attitudes toward the teacher, the school, and the subject area are increasingly important. Major influences now include the presence or absence of peers during homework times, whether peers regularly complete homework or dismiss it, whether a course is required or elective, whether or not the student is part of a college-oriented crowd, and the degree to which jobs or other responsibilities impinge on available homework time.

Practitioners would do well to realize the complexity of all of this and to invest in the kind of research that only they can do: getting to know their students themselves, along with their students' families and social worlds, and staying with these students for as long as their school structures will allow. Once they know their students and the conditions under which homework will be done, they can make sure that any homework assignments are truly doable, worth doing, and in some way rewarding to the students themselves. I don't think Kohn, Marzano, or Pickering would disagree.

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1. Laurence Steinberg, *Beyond the Classroom* (New York: Simon & Schuster, 1996).

2. As one cheerful ninth-grader told me in the first week of algebra class, "I've failed math every year since fifth grade, and they never held me back."

3. Steinberg, p. 146.

4. Alfie Kohn, *The Homework Myth* (Cambridge, Mass.: Da Capo Press, 2006), pp. 3-24.

5. Marva Collins and Civia Tamarkin, *Marva Collins' Way* (Los Angeles: Jeremy P. Tarcher, 1990), p. 133.