Conclusion

Over the course of some 180 pages and 300 endnotes, we have gone from a theoretical analysis of the effect of rewards on motivation to descriptions of school choice programs in places such as Arizona and Indiana that are transforming K–12 education in the United States. Along the way we have challenged many traditionally accepted ideas about how schools work. In their place we have described research in behavioral psychology and economics that leads to best practices. Let us briefly retrace the steps.

Popular writers claim to have found evidence that rewards in education – as Alfie Kohn put it, everything from praise, A's, and gold stars to incentive plans – do not work because they "extinguish internal motivation." Upon closer inspection, the research these writers cite is selective, based mostly on small and flawed studies largely focused on the short-term behavior of college students and not on the life-long habits and skills that matter in real life. Rigorous research shows that properly designed rewards achieve desired changes in behavior. That research also suggests not rewarding learning and other good behavior can handicap students for the rest of their lives – a stark contrast to the assertions of Kohn and his compatriots.

Similarly, we found popular authors claiming mainstream economics doesn't demonstrate the importance of incentives in everyday life. Economists, they say, assume we all act perfectly rationally all the time, an assumption easily shown to be false. Their claims fail upon close inspection. The quality of the research cited by such critics is vastly inferior to that used by mainstream economists to explain a wide range of choices

made every day. Economists do not need to assume perfect rationality to demonstrate how incentives affect learning and other behavior.

We then described the research on the use of rewards to motivate students to learn. This research demonstrated the effectiveness of rewards convincingly and repeatedly. Young children often can be strongly influenced by praise and other recognition. Successful programs also include paying students for studying, turning in homework on time, taking optional exams, enrolling in Advanced Placement courses, reading books, and coming to class on time. An appropriate theory of incentives explains why rewards that are appropriate for young children may not be appropriate for older students, why rewards that are long delayed tend to be less effective, and how reward systems that don't align with or respect a student's own interests, knowledge, and needs are unlikely to work.

Incentives also operate at the level of institutions. The literature is replete with examples of goods and services delivered in a competitive marketplace that cost less and are of higher quality than those delivered by government monopolies. The absence of rewards in public K–12 schools has led schools to operate, in the words of John Chubb and Terry Moe, "like bureaucratic agencies" rather than teams that come together to achieve a shared vision. When schools are required to compete for students and tuition, academic achievement, efficiency, and attractiveness to parents tend to improve substantially.

Greater use of incentives in education faces a potential problem: Effective incentive systems require SMART goals (Specific, Measurable, Attainable, Realistic, and Time-bound), but who should set the goals for K–12 education in the U.S.? America's political heritage and the contemporary popular embrace of cultural diversity mean a one-size-fits-all national education system similar to those in Europe and elsewhere is simply not an attractive option. In Chapter 11 we showed how school choice solves this problem by allowing schools to respond to the preferences of parents and guardians.

The second part of the book examined how parents and teachers can use rewards to assist children's learning at home, in elementary schools, and in high schools. For the very young, frequent rewards are a natural and appropriate part of parenting and an effective way to teach the important life skills of self-discipline, deferred gratification, and perseverance or "grit." Several kinds of rewards are effective in elementary schools including verbal praise, rewards built into lessons, small tokens (stickers,

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parties, and prizes), grades, arts incentives, money (real or play), and student-initiated rewards. Contrary to the views of many "progressive" educators, these incentives and rewards are popular with parents, teachers, and students precisely because they work so well.

As children get older, incentives help them focus on and practice doing things that aren't necessarily easy or entertaining. By high school, students face serious distractions from learning and may be acting out against authority figures around them, not a productive or beneficial response to the challenges they face. Combating these tendencies requires parents, teachers, and others in the community working together to provide rewards for taking small or interim steps today that will lead to the establishment of longer-term objectives too far into the future to motivate most children, such as admission to a good college or a career in a valued occupation.

In middle school and high school, appropriately designed reward systems require presenting lessons as opportunities for discovery and mastery rather than just following instructions, showing how acquiring new information and skills will increase students' "wealth" (their material belongings as well as their store of knowledge and skills), and making special efforts to show how grades or disciplinary actions are appropriate and fair. These practices take students' interests seriously and create rewards that are aligned with them. "Self-teaching," particularly through online technology, reduces the student cost of learning and consequently elevates the reward received by students who make the effort to plan their studying, monitor their progress, and seek out sources of information on their own.

The final part of the book recommended public policies that accelerate learning by being consistent with the theory and practice of rewards in education. The first policy recommendation is to make greater use of tests with rewards. We refuted a litany of objections to tests, many of them based on past experiences with poorly designed tests, and summarized some of the extensive research (expertly reviewed by Richard Phelps) showing how setting goals and measuring progress increases student motivation and performance, how frequent testing results in greater learning, and how giving students detailed analyses of their test results helps them identify their weaknesses and increases their learning.

Our second policy recommendation is performance-based pay for teachers. Teacher effectiveness varies considerably and those differences have major effects on student achievement. Good teachers are not presently

rewarded for their successes or additional efforts, and ineffective teachers often receive pay increases and pension benefits based solely on years of experience. Performance-based pay would attract people with higher skills to the teaching profession and keep the most skillful from leaving. Available research suggests this would lead to a considerable rise in student achievement.

Our third policy recommendation is to expand the use of digital learning – the combination of online adaptive testing and instruction made possible by new technologies, software, and the Internet. Digital learning is making rewards for learning more appropriate, timely, and attuned to the interests and abilities of students, thereby opening the door to a major expansion of their effective use.

Our fourth and final policy recommendation is to give schools the flexibility they need to thrive while simultaneously giving parents the freedom to choose among schools competing to serve their children. School choice, almost uniquely among the reform opportunities considered by policymakers today, has the power to truly transform K–12 education. Charter schools, already operating in 42 states, are the most common kind of school choice today. Parent triggers – laws that allow parents to petition to have their local public schools shut down or be converted into charter schools, or to receive scholarships to send their children to private schools of their choice – are a step beyond charter schools. Seven states have parent triggers so far.

More transformational than either charter schools or parent triggers are vouchers (or scholarships). Such programs allow parents to choose any school, public or private, for their children and public funds follow the students to the schools they attend. The competition and choice made possible by scholarship programs now operating in 26 states is improving the academic achievement of hundreds of thousands of children. Indiana's adoption of a statewide scholarship program promises to extend the benefits to millions of students. Education savings accounts take the idea of vouchers or scholarships a step further by allowing parents to assemble a portfolio of schools, teachers, online courses, and testing services as unique as their children, and to pay for those services out of a savings account similar to their individual retirement account or health savings account. Small pilot programs in Arizona, Louisiana, and Utah point the way for this reform.

Among the principal obstacles to increasing the use of rewards in public

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education are educators and elected officials who refuse to believe incentives and rewards can work in education. Often they are aided by interest groups such as teachers unions and school administrators who oppose any changes that might negatively affect their current authority and careers. Parents, policymakers, and committed educators must unite to overcome opposition to the use of effective reward programs in the nation's schools.

We hope this book inspires parents to make greater use of properly designed rewards at home as part of their all-important roles as their children's first and only truly life-long teachers. We hope educators will re-examine their views on the use of rewards in their classrooms and come away convinced, as we are, that rewards are an essential tool for instilling the habits and skills students need to succeed in school and beyond. Finally, we hope policymakers will work with parents and educators to remove the roadblocks to a greater use of rewards in education by adopting or expanding policies such as tests with rewards, performance-based pay for teachers, digital learning, and school choice.

With so much at stake, and with so much research readily at hand pointing to the right solutions, why wait any longer?

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