

Praise for  
*Rewards: How to use rewards to help children learn –  
and why teachers don't use them well*

Walberg and Bast have produced what is best described as a practical *tour de force* into the world of incentives and rewards. They carefully document what the research literature says, debunk much of the public misunderstandings, and then consider the actual application of the principles along with the evaluations of such applications. *Bravo!*

— Eric Hanushek, Paul and Jean Hanna Senior Fellow  
Hoover Institution of Stanford University

In this wonderfully accessible book, Walberg and Bast address an incredibly important and complex issue: How do we motivate children to succeed? As it turns out, some of what people think they know about the answer to this question turns out to be wrong. By carefully and clearly describing rigorous research, Walberg and Bast show how well-designed incentives could be used by parents and educators to instill in young people the drive to succeed.

— Jay P. Greene  
21st Century Chair in Education Reform  
University of Arkansas

*Rewards* confirms what great teachers know: Our children are driven to gain confirmation of their genuine success. In the clearest possible terms, Bast and Walberg make the case for rewarding a child's achievement honestly and consistently. This work is long overdue and valuable for teachers and parents alike

— Lisa Graham Keegan  
CEO, Education Breakthrough Network  
Former Arizona Superintendent of Public Instruction

*Rewards* is a refreshing and comprehensive look at the benefits of using rewards in all areas of K–12 education, including school choice. The authors explain when the government helps break down barriers to parents choosing the best learning environment for their children, it brings lasting rewards for parents and children, and for society as a whole.

— Pam Benigno  
Director, Education Policy Center  
Independence Institute

Walberg and Bast have penned a thought-provoking look at incentives in the classroom, and made a compelling case for why getting those incentives right matters. *Rewards* provides both a look at the research and a practical guide for using incentives to motivate students and teachers. This well-written analysis is a handbook for motivating self-directed student learning, and is a must-read for parents, teachers, and principals.

— Lindsey Burke  
Will Skillman Fellow in Education  
The Heritage Foundation

Some educators reject the idea of rewarding students for academic achievement, claiming that children intrinsically love to learn and that rewards may undermine that love of learning. But Herbert J. Walberg and Joseph L. Bast point out that those claims are shaky at best. In this clearly written book, the authors discuss empirical studies that show tremendous successes from rewards, whether they are grades on tests or “play money” that can be used to purchase items at school. The authors place these findings into the broad context of today’s changing school environment, increasingly shaped by online learning and choice programs like vouchers and charter schools. They conclude that a realistic understanding of how learning occurs can transform our public schools.

— Jane S. Shaw, President  
John W. Pope Center for Higher Education Policy

I eventually did well academically but I was a terrible junior high and high school student back in Queens in the early and mid-‘60s. This might have had something to do with how I rarely did any homework or read any of the books I was supposed to. I’ve long claimed there wasn’t anyone back then, from Governor Rockefeller on down, who could have gotten me to do so. I’ve also long claimed that in developing grand education reforms we generally downplay the simple fact that, at the end of school days, great numbers of students simply won’t be interested in cooperating. How to more effectively motivate kids not inclined to do their homework or read assigned books? For their sake and everyone’s, please read this path-breaking and invaluable book by Herb Walberg and Joe Bast.

— Mitch Pearlstein, Founder and President  
Center of the American Experiment

The authors have analyzed the information available, and they argue that rigorous research shows that properly designed rewards achieve desired changes in behavior, for both students and teachers. I have noticed that Progressive schools which eliminate awards for academic achievement as elitist still keep score in school games, and still pay the teachers. In this work, the authors have suggested a number of reward strategies, some old and some still being tested. This book will surely stimulate yet more useful discussion of the best ways to influence the elusive and essential motivations of the various people (including students) in our schools.

— Will Fitzhugh, Founder  
*The Concord Review*

It seems so obvious: Rewards motivate us all. The authors clearly refute the research of the nay-sayers to show the positive effects of rewards on motivation when applied to learning. To be most effective on prompting a person to take action or to contemplate the results, educational goals should be SMART: Specific, Measurable, Attainable, Realistic, and Time-bound. To date, too few options exist as rewards on motivation to education; however, Walberg and Bast offer specific, competitive and economical choices to remedy the status-quo.

— Charlene K. Haar, Consultant  
Teach-Now.com

Thinking about education – as contrasted with sound educational practice – has been dominated since Rousseau by an unrealistically optimistic view of human nature. From Pestalozzi, Horace Mann, and John Dewey down to present-day teacher educators, the prevailing theme has been that learning should be made intrinsically rewarding, even entertaining, that schools will blossom if teachers would just abandon what is pejoratively referred to as boring drill and kill.

Herbert Walberg and Joseph Bast are by no means opposed to education that is engaging and builds upon the interests of students, but their solidly documented book challenges the naïve belief that intrinsic interest is enough, and the parallel assumption that teachers are so high-minded that there is no need to reward them for efforts going beyond the mediocre routine. Their account of how a variety of rewards function in families as well as in schools is bracingly realistic and packed with practical strategies. It upsets many of the enshrined pieties that have dominated discussion about education.

— Charles L. Glenn, EdD, PhD  
Professor, Educational Leadership and Policy Studies  
Boston University

From eighteenth century French philosopher Jean-Jacques Rousseau to modern pop psychologist Alfie Kohn, progressives have maintained that children are naturally motivated to learn, and that to offer them achievement incentives demolishes their zest for learning. This well-researched book is a powerful antidote to such fanciful thinking. Walberg and Bast draw from economics and psychology to demonstrate how carefully designed rewards immensely benefit students, parents, and entire schools. Their work is packed with many practical, incentive-based ideas that parents, teachers, and school policy-makers could put to use to boost the quality of education for America's young.

— Robert Holland  
Senior Fellow, The Heartland Institute  
Author, *Not With My Child, You Don't*



# Rewards

How to use rewards  
to help children learn –  
and why teachers don't  
use them well

Herbert J. Walberg ■ Joseph L. Bast

**The Heartland Institute**  
*[www.heartland.org](http://www.heartland.org)*

For my grandchildren, Alana, HJ, and Willa.

— HJW

For Sister Agatha, who taught me how to read and write.

— JLB

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## ***Preface***

This book shows how rewards motivate students to learn and how their appropriate use accelerates learning. For some readers this merely confirms the ancient common-sense view that “incentives matter.” Children seek praise from adults and strive to win in competitions with their peers while adults work harder for recognition, raises, promotions, and other rewards.

This view has been challenged by popular writers and is controversial in schools of education and teachers’ lounges throughout the country. Surprising numbers of teachers oppose using rewards in their classrooms and rewarding teachers or schools for superior achievement. Many of these same teachers oppose tests and using recent advances in digital learning that can more closely align rewards with achievement.

The conceptual framework presented in this book combines principles from behavioral psychology and economics, empirical research conducted in classrooms in kindergarten through 12th grade, and careful studies of the effects of incentives on teachers and school performance. Many rigorous laboratory and field studies by psychologists show how the expectation of rewards or “reinforcements” for reaching goals increases effort and dedication to performing a task well. Research by economists demonstrates how incentives influence behavior as individuals weigh anticipated benefits against their costs in time, effort, money, and foregone opportunities.

While adults are usually paid for their work efforts, it may seem odd to think students should be rewarded or even paid to study or do well on tests. Extensive evidence, though, reveals the power of money as well as non-monetary rewards to influence student learning. Of course, financial

rewards are not the only means of motivating young people. Youth invest huge amounts of time and effort in sports and games for their immediate short-term benefits, and they make sizeable sacrifices for altruistic purposes. Some also commit to long hours of demanding study for a chosen career.

We acknowledge early learning takes place socially as parents, teachers, and others encourage children's natural curiosity and innate desire to solve problems. Most children gain satisfaction from pleasing their parents or teachers. They may find learning in itself rewarding. We stipulate that what is rewarding for one student may have little effect on another. But internal motivation alone often isn't enough to help students begin or remain engaged in educational activities. Successful achievers often require personally meaningful rewards to achieve their goals. As they achieve greater mastery, their accumulated skills can become rewards in themselves for continued effort. But until that time, external motivation – rewards – can be crucial.

The hundreds of endnotes in this text refer interested readers to mostly academic research from which the conclusions are drawn. Most heavily weighted are laboratory experiments and randomized field trials in which students are assigned by lottery to either incentivized reward conditions or control groups without rewards. Also included are non-randomized studies that follow students who were similar in socioeconomic and demographic status and in achievement at the start of the research; the studies then contrast the achievement levels of students exposed to rewards with those of students who were not or with those given alternate rewards.

Popular books, news publications, and websites are cited later in the book to show how educators today are successfully using rewards in schools and how innovators are creating opportunities to make rewards immediate, personal, and more precisely aligned with learning progress. We are entering an age of technology and innovation in which rewards can be used more widely, cheaply, and effectively than ever before. All students can be helped by rewards – provided parents, teachers, and policymakers employ well-designed incentives to accelerate learning.

## ***Acknowledgments***

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Walberg thanks the Koret Foundation and its president, Tad Taube, Hoover Institution Director John Raisian, and Hoover Senior Associate Director Richard Sousa, who supported his early work in planning and drafting the book manuscript. He also thanks Aileen Reid, Winnie Starhia, Trudy Wallace, and Alana Williams as well as his colleagues on the Koret Task Force on K–12 Education and anonymous reviewers for helpful comments on previous versions of the book. They prompted us to transform a dull and scholarly draft into a book we hope is useful to a wide range of readers.

Bast also thanks Randy Piper, a brilliant and unconventional scholar, for lighting a path through the dense thicket of scholarly and popular literature on incentives and motivation. It proved invaluable as we penetrated the deeper levels of the debate over intrinsic versus extrinsic motivation and how it plays out in fields outside of schooling.



## ***Introduction***

In the study of human nature, incentives have a long history. Aristotle, for example, distinguished motivational incentives of knowledge, pleasure, and material advantage.<sup>1</sup> Generally speaking, an incentive is a psychological experience that tends to cause greater or lesser effort to achieve an objective. Positive incentives are created by the prospect of rewards, which are usually money, physical objects, states of mind, or desirable actions, while negative incentives are created by fear of punishment or loss.<sup>2</sup>

Some learning is natural, seemingly easy, and may bring pleasure. Learning at the advanced levels necessary for mastery, however, often is difficult and requires diligent study and practice, which is likely to require appropriate incentives. Some students may be motivated primarily by the pleasure of learning, others by the prospects of short-term rewards such as grades, positions in rankings, recognition by peers or teachers, or material rewards such as prizes or money. Others may work hard for the long-term gain they hope will come from professional occupations, while still others may be motivated by a sense of fairness or the opportunity to do good turns for others.

Given the power of incentives to influence behavior, an informed and wider use of appropriate rewards can help students accelerate their learning and acquire knowledge and skills more quickly or at higher levels than they otherwise would.

### **Why Academic Achievement Matters**

Socrates famously said “the unexamined life is not worth living.” He was

reflecting on the private benefits of learning about ourselves and the world around us. The more we learn about our own thoughts and desires, abilities, limitations, and surroundings, the better able we are to make informed choices about our health, family, occupation, recreation, and myriad other parts of our lives. The non-monetary benefits of learning may be difficult to measure, but they shape and determine what we recognize to be the quality of our life.<sup>3</sup>

Academic achievement produces public as well as private benefits. Eric Hanushek of the Hoover Institution and his colleagues have shown the strong relationship between school achievement and economic growth.<sup>4</sup> Hanushek and former secretary of state George P. Shultz estimate that if our school mathematics scores were comparable to Canada's over the next 20 years, U.S. gross domestic product (the value of goods and services produced in the country) would improve by \$70 billion over the next 80 years, a figure equivalent to an income boost of 20 percent for each U.S. worker.<sup>5</sup> That would be a considerable social benefit.

Academic achievement also benefits democratic institutions. When compared to other nations, those with higher levels of education and ability show stronger democracy, less crime, and greater political liberty.<sup>6</sup> Corruption is less common in countries where citizens are well educated.<sup>7</sup>

Within societies, academic abilities increase in step with levels of education, and a nation's relative wealth increases along with both.<sup>8</sup> Cities also tend to grow more quickly when this kind of human capital creates a capable workforce that remains economically productive over time.<sup>9</sup>

Nations tend to benefit to the degree their citizens fulfill their potential. When citizens develop their abilities, liberty tends to expand and moral behavior tends to be higher.<sup>10</sup> Following Hanushek's work, Heiner Rindermann of Germany's Chemnitz University of Technology and James Thompson of University College London found a nation's overall abilities and knowledge are deciding factors in a nation's wealth, scientific progress, and economic freedom.<sup>11</sup> The world's wealthiest nations have sustained strong intellectual traditions that result in notable accomplishments in engineering, mathematics, technology, and basic and applied science.<sup>12</sup> Cross-national studies emphasize the importance of encouraging exemplary learners to achieve as much as they are able. Societies that support top performers and seek to maximize their abilities appear most likely to benefit all their citizens.<sup>13</sup>

Effective primary and secondary schools offer learning opportunities

and rewards for acquiring the knowledge and developing the thinking skills students need to succeed in college and workplaces and to participate as citizens in free societies.<sup>14</sup> Longitudinal studies using academic test scores from 90 countries found that despite wide differences in culture, students scoring highest, particularly those in the top 5 percent, also made the largest contribution to their nation's economies.<sup>15</sup> If more students can achieve such levels, they, their compatriots, and their society stand to benefit.

Finally, the quick early learners become ever more knowledgeable and skilled as time goes on, the result of what is called the "Matthew Effect" after this passage in the Bible's Book of Matthew: "For whoever has will be given more, and they will have an abundance." Their work becomes increasingly better than others' and easier for them, which can reinforce their desire and ability to persevere through ever-more-difficult challenges.<sup>16</sup> Academic achievement in elementary and secondary school can foster higher levels of achievement in college and beyond.

### **Acquired Self-Discipline versus Intelligence**

Success in academics and adult life often is attributed chiefly to intelligence, which is presumed to be innate and therefore unaffected by incentives and rewards. But researchers have found academic success is more closely related to acquired self-discipline than intelligence.<sup>17</sup> Discipline, effort, and perseverance all can be changed by incentives. Self-disciplined students who persevere through difficulties tend to gain entrance to better universities and professions and also achieve success in such highly competitive non-academic fields as athletics, the arts, and entrepreneurship, in which winners increasingly tend to take all or nearly all.

The importance of self-discipline and hard work, which some researchers call "grit" or "drive," is a theme to which we will return frequently. The best players in a sport often are not the ones who can throw the farthest or run the fastest, but those who spend many hours studying the game and thoughtfully practicing techniques that lead to winning.<sup>18</sup> This phenomenon may be universal and apply to nearly all human activities, but it is most visible and recognized in sports because the success or failure to acquire skills and knowledge is plainly on display in athletic competitions, whereas failure in other settings often can be hidden or excused by factors other than lack of practice or study. The use of public recognition, trophies, and the right to advance to higher levels of competition is prevalent in

middle- and high-school sports programs but is said to be unnecessary and discouraged in classrooms in the very same schools.

The skills and knowledge acquired outside of class competing with peers in high school and college can contribute to success later in life. “The place that best prepared me for college was the hardwood court of men’s [high-school] varsity basketball,” University of Michigan senior and pre-law major Andrew Snow told *Education Next* recently.<sup>19</sup> He said playing basketball taught him to work with others under pressure, a work ethic, responsibility, and humility. The article quoting him highlighted “a growing body of research” linking after-school activities with high-school graduation, college attendance, and civic responsibility. And indeed this is what the literature shows: Finding and joining constructive activities can help strengthen social networks and compensate for broken homes.<sup>20</sup> Religious and other community organizations such as the YMCA, YWCA, Scouts, and other organizations for boys and girls have traditionally provided such opportunities.

Constructive after-school activities also can help learners acquire the skills they will need eventually to join the adult workforce. Feedback and rewards for specific achievements teach youth about their talents and needs for improvement. Active involvement in civic organizations such as 4-H and Junior Achievement help teenagers learn to plan, communicate, and negotiate.<sup>21</sup>

## Overview of Chapters

Part 1 of this book explains why rewards are a necessary part of effective schooling. Support for using rewards was nearly universal in the U.S. until the 1960s and 1970s, when academic and popular expositors such as Jean Piaget, Benjamin Spock, and William Glasser criticized their use on a variety of philosophical, pedagogical, and political grounds.

Chapter 1 reviews the debate among psychologists over the effects of rewards on intrinsic (internal) motivation leading to self-selected choices and behavior. Critics of rewards, under the influence of Jean-Jacques Rousseau and similar philosophers, believe humans, being naturally good, are initially predisposed to be curious and to seek solutions to problems. They are, therefore, internally motivated to learn, but these tendencies are curbed by the invidious influences of parents, teachers, and society. They claim reliance on rewards or extrinsic (external) motivation undermines intrinsic motivation, resulting in less rather than more desirable behavior.

Defenders of rewards counter with theories and evidence that properly designed reward systems do not extinguish intrinsic motivation and in fact can create the conditions young learners need to discover and develop their own goals and learning incentives.

Chapter 2 describes how a parallel debate occurred among economists. Most economists believe rational self-interest and “opportunity costs” (the loss of benefits that would have resulted from a different choice) explain most economic behavior and even a wide range of choices not traditionally thought of as economic transactions. An opposing school claims this model of “economic man” contradicts how real people make choices when confronted with uncertainty. Just as the debate among psychologists resulted in a more nuanced theory of motivation, so has the debate among economists resulted in a better understanding of the role of assumptions in the methodology of economics.

Chapter 3 reviews research on whether rewards really are an effective way to support learning. The chapter concludes that the effectiveness of rewards depends heavily on the circumstances in which they occur. Research shows properly designed rewards are effective in classrooms. The absence of rewards has been shown to have negative effects on student achievement. Critics of rewards focus on instances where rewards were poorly designed or where the research used to study them was unreliable.

Chapter 4 discusses the importance of setting the right goals. Policymakers, educators, parents, and learners themselves all play roles in choosing goals and appropriate rewards for reaching them. We discuss who is best positioned to set goals and how goals and reward systems can best complement one another.

Part 2 of the book shows how to use rewards successfully at home (Chapter 5), elementary schools (Chapter 6), and secondary schools (Chapter 7). These chapters may be of greatest interest to parents and educators looking for examples of how rewards are helping learners of all ages and in diverse school settings. The sheer number of examples and plenitude of research showing their effectiveness should put to rest any lingering doubts as to the effectiveness of properly designed rewards.

Part 3 explores the ways parents, educators, and policymakers can use rewards to accelerate learning. Chapter 8 explains how achievement testing can be paired with rewards to accelerate student learning. Good examples are requiring students to pass tests before advancing to the next grade, providing cash rewards to students for taking or passing optional tests such

as Advanced Placement (AP) exams, and providing cash rewards to teachers for helping students pass such exams. Since testing has come under attack by many of the same critics who oppose the use of rewards in schools, we review some of the extensive evidence showing testing is a reliable way to track student achievement and is necessary to provide feedback to learners, teachers, and parents.

Chapter 9 describes research on programs that reward good teachers. We review evidence suggesting large increases in student learning could occur if the behavior of teachers were changed. We show how the current system of paying teachers according to a “single-salary schedule” or “position-automatic system” contributes to the problem of teacher burnout: teachers who feel disrespected, helpless, and trapped in their careers. After reviewing how performance-based pay works in other occupations, we present a series of best practices that apply to its use in schools.

Chapter 10 reports the impressive results of new educational technology that is revolutionizing K–12 schooling in the U.S. and around the world. Digital learning systems solve the biggest challenges facing reward systems: how to tailor the rewards to each student’s individual needs and provide immediate and accurate intervention. We describe four successful applications already underway and best practices for policymakers and educators seeking to expand the use of digital learning systems.

Chapter 11 explains how school choice programs can be designed to motivate parents and reward teachers and school entrepreneurs whose schools succeed in raising academic achievement levels. The absence of competition among schools is the major reason so many American educators have made little use of the striking power of rewards documented in earlier chapters. We present four examples of successful school choice programs – KIPP charter schools, California’s parent trigger, Indiana’s voucher program, and Arizona’s education savings accounts – and document their success. Best practices are given for the design of each kind of school choice program.

A brief conclusion wraps up our findings and urges parents, educators, and policymakers to help children learn with rewards.

## Notes

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