

# Shooting for Stars

Cross-Sector Lessons for Retaining  
High-Performing Educators

JOE ABLEIDINGER AND JULIE KOWAL

**PUBLIC IMPACT**



## About the Authors

JOE ABLEIDINGER is a consultant with Public Impact. He works on a variety of education policy issues, including human capital management and charter schools, online learning alternatives, school finance laws, and school turnarounds. Mr. Ableidinger received his B.A. with highest honors from Duke University, his master's in public administration from Harvard University, and his law degree with honors from Harvard Law School.

JULIE KOWAL is a senior consultant with Public Impact. Her work addresses challenging policy and management issues in education, including compensation, teacher quality and other human capital topics; turnarounds; chartering; and school contracting. Ms. Kowal both conducts and leads teams to produce research and analysis, and her work often includes seeking out critical lessons from other sectors. An alumna of AmeriCorps NCCC and Public Allies DC, Ms. Kowal earned her law degree with honors from the University of North Carolina at Chapel Hill.

## About the Series

This report is part of the series *Building an Opportunity Culture for America's Teachers*. To see all the reports in this series, please visit [www.opportunityculture.org](http://www.opportunityculture.org).

## Acknowledgements

*Shooting for Stars* was made possible with support from the Bill & Melinda Gates Foundation and The Joyce Foundation. The views expressed in this report are those of the authors and do not necessarily reflect the views of the funders. It is part of a series of reports about "Building an Opportunity Culture for America's Teachers." The authors would like to acknowledge Emily Ayscue Hassel, Bryan Hassel, and Lynn Olson for their thought partnership and insightful review of and additions to the report. We are also grateful to Daniela Doyle and Jacob Rosch of Public Impact for their assistance interpreting data and preparing report graphics. Dana Brinson oversaw production and dissemination of the report. In addition, several external reviewers provided helpful feedback and insights, though all errors remain our own. Finally, we would like to thank Sharon Kebschull Barrett for careful editing, and April Leidig-Higgins for the design of the report.

© 2010 Public Impact, Chapel Hill, NC

Public Impact is a national education policy and management consulting firm based in Chapel Hill, NC. We are a team of researchers, thought leaders, tool-builders, and on-the-ground consultants who help education leaders and policymakers improve student learning in K-12 education. For more on Public Impact and our research, please visit: [www.publicimpact.com](http://www.publicimpact.com).

Public Impact encourages the free use, reproduction, and distribution of this working paper for noncommercial use. We require attribution for all use. For more information and instructions on the commercial use of our materials, please contact us at [www.publicimpact.com](http://www.publicimpact.com).

# Shooting for Stars

## Cross-Sector Lessons for Retaining High-Performing Educators

By Joe Ableidinger and Julie Kowal

### EXECUTIVE SUMMARY

As the United States continues to grapple with unacceptable education results, “a great teacher for every student” has risen to a national imperative. In response, many districts have increased retention efforts through teacher induction programs, professional development, mentoring, and other strategies. But education actually has lower turnover rates than most other professions. Our real shortcoming has been the failure to retain more high performers — those teachers who continually achieve outstanding results with students. When high-performing teachers across the country leave our classrooms each year, 750,000 children find themselves assigned to a less-effective teacher in each subsequent year.<sup>1</sup>

To retain high performers, organizations in other sectors use a variety of strategies. In this report, we examine the research and case studies outside education to reveal **four key strategies to boost high-performer retention:**

- ▶ **Pay with purpose.** Pay matters more to high performers than other employees, and research shows that it can keep them or send them fleeing. Jobs with differentiated pay, competitive pay packages, and timely raises all make it more likely that high performers will stay.
- ▶ **Give high performers mountains to climb.** In addition to the salary increases or bonuses that often accompany them, promotions and opportu-

nities for advancement boost retention, especially of high performers.

- ▶ **Design flexible and challenging work roles.**

High-performing employees value opportunities to step into new roles and take on new challenges, even ones that do not involve linear advancement. Challenging work and jobs that are aligned with individual employees’ interests make it more likely that an organization will retain its stars.

- ▶ **Build lasting teams.** Well-crafted hiring processes can improve both performance and retention of high performers. After hiring, grouping high performers together improves collective performance and lowers turnover.

Education actually has lower turnover rates than most other professions. Our real shortcoming has been the failure to retain more high performers.

These four strategies are the ones best supported by a robust research base that spans years and diverse organizational settings. Several other options also arose from the research, and **these additional strategies show some success and promise for retaining top talent:**



- ▶ **Enhance organizational prestige.** An organization's reputation in the community or relevant industry is more important to high performers than other employees. Building prestige as a firm, therefore, can help encourage top employees to stay.
- ▶ **Train and mentor high performers.** Well-designed and implemented training and mentoring programs decrease employee turnover, including among high performers.
- ▶ **Provide lifestyle perks.** A natural outgrowth from customized compensation packages are “lifestyle perks” — or non-financial benefits — that organizations can use to retain stars.
- ▶ **Open lines of communication between employees and company leaders.** Finally, an organization's intentional efforts to foster transparency and clear communications throughout the company can improve employee retention.

If these *systemic* strategies do not succeed in keeping a high-performing employee, many employers will “go to the mat” with *individualized* strategies. These strategies might include higher compensation, a new job role or work assignment, a combination of lifestyle perks described above, or any number of other changes, based on what is most important to the employee.

Very successful organizations in other sectors have recognized that, despite their best retention efforts, some high performers will inevitably leave. They prepare for this reality — and **maximize the value of their stars while they can** — through three targeted strategies:

- ▶ **Retain relationships with star employees who leave.** Companies that remain on good terms with high performers after their departure can benefit from the relationship long after employment ends, whether through continued collaboration or the good words spread among the former employee's new work contacts.
- ▶ **Generate positive non-hires.** Applicants who are turned down for jobs may later become the organization's employees, customers, or partners. The more positive an organization can make the screening process, the more likely benefits are to accrue down the line.
- ▶ **Use post-employment contracting.** Organizations can use short-term contracts to keep a high-performing employee who might otherwise leave the organization entirely.

The best approach to high-performer retention may ultimately be a portfolio of initiatives that includes organization-wide policies, action to keep individual high performers, and practices to maintain positive relationships with departing stars. Some retention tactics require policy changes to implement in K-12 public education, but many do not. **Determined education leaders can take these steps to retain more great teachers:**

- ▶ **Make high-performer retention a top priority.**
- ▶ **Set high-performer retention goals — and then measure success.**
- ▶ **Use retention tactics that do not require policy changes — right away.**
- ▶ **Rebuild education policies to provide opportunities and rewards for our nation's great teachers — and the children they could serve.**

# Introduction

As the United States continues to grapple with unacceptable education results, “a great teacher for every student” has risen to a national imperative. But it has become clear that our nation does not have enough great teachers to serve all of our children. Talent shortages persist in rural and urban communities across the country and in such shortage areas as science, special education, and math.<sup>2</sup> A “revolving door,” particularly among newer teachers, exacerbates these shortages across nearly all schools and subject areas.<sup>3</sup> Meanwhile, our nation’s stubborn internal and international achievement gaps indicate that we need more teachers who achieve strong student-learning progress.<sup>4</sup>

In response to these trends, many districts have increased retention efforts. Common tactics include teacher induction programs, professional development, and various other supports for new and experienced staff.<sup>5</sup>

But education actually has lower turnover rates than most other professions.<sup>6</sup> Our real shortcoming to date has been the failure to *retain more high performers* — those teachers who achieve outstanding results with students year after year, and who leave our classrooms at the same or only slightly lower rates than their average or less-effective peers.<sup>7</sup> These are the teachers who close achievement gaps and raise the bar when students are ready, achieving far higher learning progress than typical teachers.

In almost every way, K–12 public education fails to differentiate teachers based on their performance. Our hiring and placement policies, professional development plans, pay systems, and tenure decisions treat all teachers as if they are the same.<sup>8</sup> But when it comes to retention, a teacher’s effectiveness is of utmost importance: neither students nor the public education system as a whole will benefit from better retention of low performers. And the loss of each top

teacher is a direct learning loss for many students in subsequent years.

As the national conversation about teaching effectiveness becomes more sophisticated, and states and districts begin to distinguish great teaching from good, good from fair, and fair from poor, retention must stay in the forefront of our minds.

**In this report, we:**

- ▶ **briefly make the case for improving retention of the best teachers;**
- ▶ **share four critical lessons and other findings from sectors that have successfully held on to their high performers; and**
- ▶ **outline initial steps for education leaders who want to retain more great teachers.**

## Why Retention Matters

In education, we tend to assume that retention is a valid goal — keeping teachers at any but the very lowest level of performance is better than allowing them to leave. This assumption may or may not be correct, depending on the replacement pool. What we can say with certainty is this: the departure of high-performing teachers from U.S. classrooms each year leaves about 750,000 children with less-effective teachers in each subsequent year.<sup>9</sup> Moreover, turnover is costly, and replacement recruiting is an uncertain game.

The costs of turnover

When an employee leaves an organization, employers face direct costs related to recruiting, hiring, and training replacements. Turnover also produces indirect costs associated with delayed production, decreases in service quality, lost clients, and disruptions to team-based work. In some cases, departing employees may influence others to leave, which fur-

ther increases all of these costs. Research from the private sector has shown that replacing an employee may cost as much as 50 to 60 percent of the employee's annual salary, with the total cost of turn-over estimated at 90 to 200 percent of annual salary. In education, some studies estimate the national cost of teacher turnover may exceed \$7.3 billion every year.<sup>10</sup>

### The risks of replacement

When an organization replaces an employee, the replacement pool for that position will inevitably include some potential high performers, but will also include many more who will turn out to be typical or low-performing. Even with rigorous pre-screening methods — which are rarely if ever used in U.S. education — not all candidates who “pass” will turn out to be high performers.<sup>11</sup> Nothing is more certain than keeping a teacher who already delivers great results.

By retaining a larger number of employees at the top end of the effectiveness distribution, districts and school management organizations can take greater control of the overall quality of their teaching workforce and their organizations.

### Lessons from Other Sectors

We can learn a tremendous amount about successful strategies for retaining top performers from sectors outside education, where performance pressures have made the retention of stars an organizational imperative, and a longer history of experimentation has yielded a rich research base. Organizations in private sectors facing stiff competition must keep top talent in critical roles. If they do not, they face declining revenues and profit, followed by a further loss of top talent seeking greener fields. Loss of even a few key employees can reverse a company's fortunes. Even with more talent in the job market in the wake of the

Great Recession, retaining high performers remains a top concern for businesses.<sup>12</sup>

We explored the research, case studies, and expert opinion from these sectors, therefore, to learn what successful organizations in other sectors do to retain high performers. Our sources included top management journals, consultants' reports, and leading books on talent management and retention strategy.

To retain high performers, organizations use a variety of approaches. Our research has revealed four key strategies with robust support in the literature and salient examples of organizations putting them into action:

- ▶ **Pay with purpose.** Pay matters more to high performers than other employees, and research shows that it can keep them or send them fleeing. Jobs with differentiated pay, competitive pay packages, and timely raises all make it more likely that high performers will stay.
- ▶ **Give high performers mountains to climb.** In addition to the salary increases or bonuses that often accompany them, promotions and opportunities for advancement boost retention, especially of high performers.
- ▶ **Design flexible and challenging work roles.** High-performing employees value opportunities to step into new roles and take on new challenges, even ones that do not involve linear advancement. Challenging work and jobs that are aligned with individual employees' interests make it more likely that an organization will retain its stars.
- ▶ **Build lasting teams.** Well-crafted hiring processes can improve both performance and retention of high performers. After hiring, grouping high performers together improves collective performance and lowers turnover.

# Key Strategies for Retaining High Performers

The remainder of this report delves into each of these lessons, providing detailed explanations and examples from organizations in other sectors that have “walked the walk.” In the report’s conclusion, we briefly make the case for adopting and adapting these strategies to increase retention of high-performing educators.<sup>13</sup>



## Pay with Purpose

The literature from across sectors provides strong evidence that tying compensation to performance can have positive effects on the overall quality of a workforce, including increased retention of the most successful employees. Decades of research suggest that performance-based pay is more attractive to high performers — those who stand to earn more and are confident in their skill, and those whom organizations most want to keep. In addition, setting competitive salaries, awarding timely raises, and tailoring compensation packages to individual employees can dramatically improve an organization’s success at keeping its top performers.

### 1. Differentiate pay based on performance

**How it works.** When employees’ performance is *not* tied to compensation, high and low performers both tend to quit more frequently than their average-performing peers.<sup>14</sup> High performers have more alternative job opportunities, while low performers may leave (voluntarily or involuntarily) due to poor performance or lack of engagement in work.<sup>15</sup>

But when a company ties even a portion of employee compensation to performance, the best workers increasingly remain while low performers continue to depart, sometimes at even higher rates, thereby increasing the overall value of the company’s

workforce.<sup>16</sup> About 90 percent of major companies in the United States use performance pay for this reason, as well as to increase employees’ motivation and productivity.<sup>17</sup>

**When companies tie compensation to performance, high performers stay . . .** An organization’s stars stand to gain rewards commensurate with their higher contributions under differentiated pay systems. As a result, these rewards most strongly affect the turnover rate for high performers. For example, a meta-analysis of 55 studies of performance pay in various private sector settings suggests that performance-based rewards improve retention of high performers.<sup>18</sup> In addition, a study of more than 5,000 employees at a large petrochemical organization demonstrates a significant relationship between pay, performance, and turnover — high performers

FIGURE 1. Shooting for Stars — Four Key Strategies for Retaining High Performers

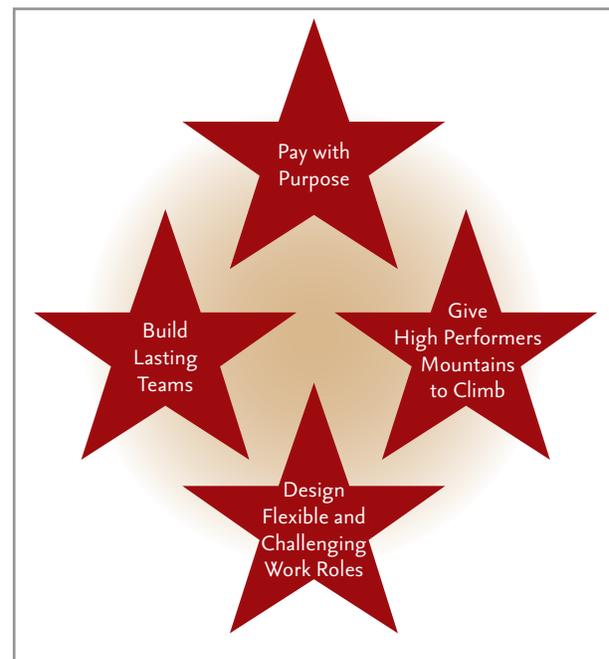
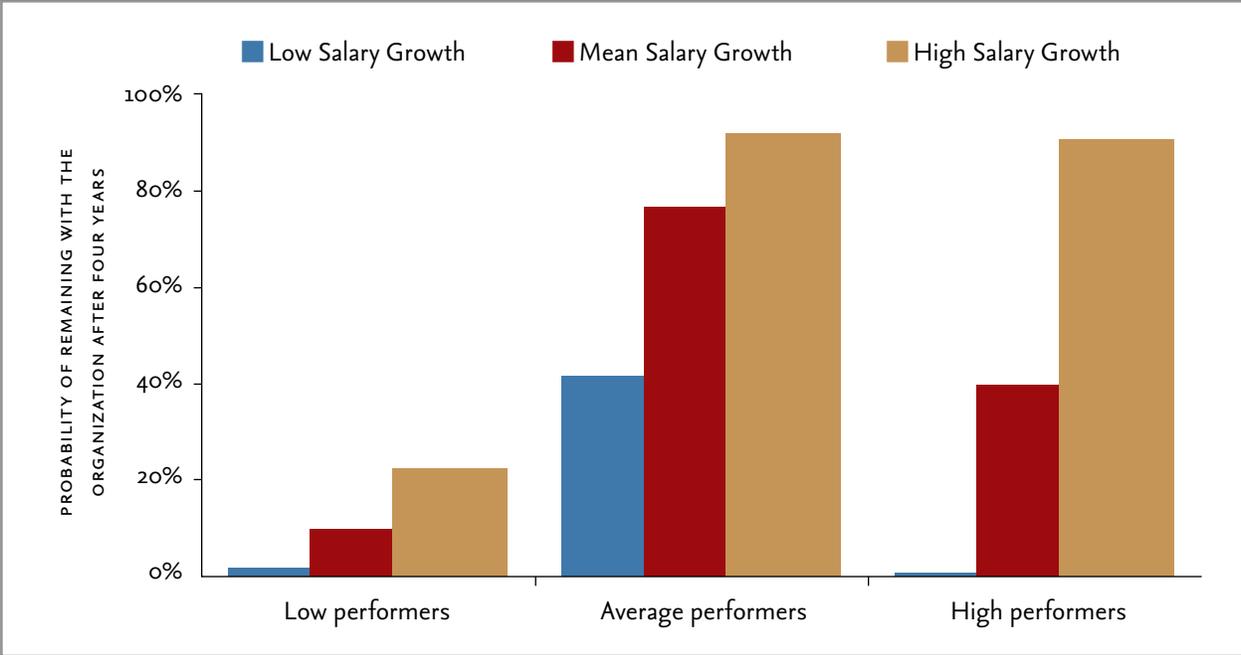


FIGURE 2. Effect of Salary Growth on High-Performer Retention



Source: Adapted from data presented in Trevor (1997). Low-performing employees in this study who experienced high salary growth remained with their organizations after four years about 20 percent of the time. By contrast, average and high performers who experienced high salary growth remained with their organizations nearly 90 percent of the time. As the graphic shows, high performers were most sensitive to salary growth — almost no high performers who experienced low salary growth remained with the organization for four years, while approximately 40 percent of those experiencing mean salary growth and nearly 90 percent of those experiencing high salary growth stayed. Low and average performers showed less variability in their turnover rates based on salary growth.

are more sensitive to the link between performance and pay than average and low performers.<sup>19</sup>

Tying larger portions of an employee’s pay more strongly to performance makes it even more likely that the pay plan will influence that employee to stay. For example, a study of sales representatives found that basing pay entirely on commission generated a stronger link between performance and retention than pay based only partially on commission.<sup>20</sup> Similarly, an analysis of compensation practices at 151 large Dutch firms suggests that higher ratios of contingent to fixed pay allow companies to attract and retain higher performers.<sup>21</sup> Research on 11,098 Swiss bank employees found that retention rates of high performers improved with the size of a performance-based bonus.<sup>22</sup>

... and low performers leave. Under well-designed performance pay systems, low-performing employees continue to exit.<sup>23</sup> The meta-analysis of 55

studies of performance pay in action led researchers to conclude that performance-based rewards *increase* turnover among lower performers.<sup>24</sup> Similarly, the petrochemical organization study found that providing greater pay growth for high performers encouraged low performers to leave.<sup>25</sup> In some systems, performance-based rewards may be coupled with performance-based *penalties* that push out low performers.<sup>26</sup> Strong performance-based compensation systems, therefore, can offer the dual benefit of retaining effective employees and encouraging the voluntary exit of low performers.<sup>27</sup>

**But to retain high performers, performance pay systems must be designed well.** The benefits described above accrue only when performance pay systems are designed well — incorporating characteristics well-documented in compensation literature and research. Critical elements of performance pay systems include: basing plans on fair measures that

accurately reflect an employee's results; rewarding all important goals of a job; providing frequent feedback on progress; offering substantial, motivating rewards for higher performance; and providing rewards for above-average, not just stellar, performers.<sup>28</sup>

For example, under a performance pay system in which high performers are not adequately rewarded for their work — because the measures do not accurately assess contributions, for example — they will be more likely to leave than they would be under a traditional compensation system. High performers also prove more sensitive than average performers to the size of performance bonuses, and more likely to stay when the size is significant. In the Swiss bank study noted above, high performers who did not receive bonuses quit far more frequently than lower performers who failed to receive them. Also, the size of the bonus had a greater impact on retention of top performers than on employees at all other performance levels. Eighty percent of top performers remained in their jobs for at least two years when the bonus exceeded 10 percent of base pay, compared with less than 35 percent who stayed for that long when the bonus was less than 10 percent (top performers earned an average bonus of 30.5 percent in the study). The retention gap was far smaller for employees at all other performance levels.<sup>29</sup>

Performance pay systems also affect high-performing employees who are not an organization's top stars, but nonetheless contribute significantly to its success. If a compensation system does not fairly reward them for their contributions, they may be more likely to depart. Data on engineers in high-tech companies in San Francisco indicate that rewarding *only* top performers can actually increase departures among their moderately high-performing colleagues.<sup>30</sup>

In sum, this collection of research suggests that performance pay plans have a strong impact upon employee performance and retention. And for organizations to see beneficial effects among their high-performing employees, their pay systems must be well-designed.

## Examples in Action

**Fleet Boston Financial** (“Fleet Bank”), one of the largest banks in the United States prior to its 2004 merger with Bank of America, examined four years of employee data to find root causes of high employee turnover. Using statistical modeling, the company determined that one of its highest-value retention strategies would be to provide consistent pay increases to good and exceptional performers. It also found that mere participation in incentive programs improved retention, and therefore enrolled as many top performers as possible.

Within eight months of implementing these and other retention strategies, Fleet Bank saw a 40 percent decline in turnover among salaried employees and a 25 percent decline among hourly employees, bringing an estimated savings of \$50 million to the company. What's more, Fleet Bank found that its improved retention came from retaining its best people, not from retaining large numbers of low performers. And the success of the strategies persisted long after the original implementation, keeping turnover low even in the face of significant organizational stressors.<sup>31</sup>

**Universal Card Services**, an AT&T subsidiary in the credit card business, instituted a program allowing employees to earn rewards based on daily performance, up to \$500 per quarter for associates and up to 20 percent above base salary for managers. After the company began these initiatives, it experienced employee turnover far below the average for financial services companies.<sup>32</sup>

*(Continued on next page)*

### Examples in Action (Continued)

**Google**, the internet search giant, motivates superstars to join and remain with the company through a compensation system that ties pay directly and strongly to the value employees add. Employees earn salaries on par with or slightly below industry averages, but they can earn annual bonuses of 30 to 60 percent of their base salary, and even more if they generate high-profit ideas.<sup>33</sup>

**Merrill Lynch**, an investment banking and wealth management firm and, at the time, the world's largest brokerage, selectively targeted compensation-based retention incentives at high-performing brokers who had been with the company for less than six years. This retention strategy addressed a trend wherein promising new hires received training with the company, then stayed for just a few years before moving to competing firms. The year before Merrill Lynch instituted this plan, its broker turnover was 8 percent above the industry average. One year after the plan took effect, broker turnover was 11 percent *below* the industry average.<sup>34</sup>

## 2. Provide competitive compensation and timely raises

**How it works.** Competitive compensation and timely raises act as “carrots” to attract and retain high performers.

**Competitive compensation and timely raises boost high-performer retention.** The level and competitiveness of employees' compensation affect their decisions to stay or leave. A study of 5,143 employees in a single, large organization found that high salary growth lowered turnover probability, most substantially at higher performance levels. In this study, the effect of salary growth on turnover probability was more than twice as large for employees in the top

two performance levels than the effect at all other performance levels.<sup>35</sup> Survey data also demonstrate that highly competitive pay packages increase organizational commitment (a key factor in employee retention), especially among top performers.<sup>36</sup> And in a 2003 survey of 44 managers in knowledge-intensive industries in Singapore, performance incentives and a highly competitive pay package were cited as the two most effective strategies for retaining knowledge workers.<sup>37</sup>

**Conversely, inadequate compensation and a lack of timely raises drive high performers away.** The flip side, of course, is that inadequate pay can drive employees away from organizations, with a greater impact on high performers than on their average-performing peers. A study of 2,510 former hospitality industry employees who left their jobs between 2003 and 2005 revealed that pay was one of the two most important factors in employee decisions to leave organizations, and it was more important to the highest performers than to average and low performers.<sup>38</sup> A lack of salary growth through an absence of timely raises also leads to frustration and turnover among all employees, but especially high performers.<sup>39</sup>

## 3. Customize compensation

**How it works.** Tailoring compensation packages to individual needs and desires increases an organization's ability to meet diverse preferences among its top employees, lowering the likelihood of voluntary departure.

**Customizing compensation packages may help organizations find winning combinations that encourage more high performers to stay.** Of course, not all employees — or all high performers — are equal, either in their value to the organization or in the mix of factors that shape their decisions to leave or stay. One top human resources expert from the Wharton school, Peter Cappelli, posits that top-performing employees, especially those in jobs most critical to an organization's success, may warrant specialized retention efforts reflecting their outsize

value to the organization.<sup>40</sup> Employers can also build flexibility into compensation systems that allows high-performing employees to personalize their compensation. International professional services firm Deloitte advises its client organizations to allow employees to choose from a menu of options including base salary, bonuses, pensions, and benefits, and even non-monetary variables such as work-life balance and the freedom to move among departments or choose their projects.<sup>41</sup>



### Give High Performers Mountains to Climb

Achievement, recognition, advancement, and growth have long been regarded as keys to building and sustaining employee motivation.<sup>42</sup> All four of these factors are wrapped up in an organization's opportunities for advancement. Like performance pay and customized incentive packages, opportunities to advance within an organization increase retention rates of all employees, but especially high performers. Although salary increases also typically accompany progress within an organization, the opportunities for advancement themselves boost retention among high-performing employees.

**How it works.** Firms generally offer advancement through promotions, which serve as major markers of sustained achievement, validating quality and reflecting employees' increasing value to the organization and the profession over time. Careers with many paths, each with multiple opportunities to advance, enable continuous career growth, ensuring that employees always have new goals in their sights.

**All employees are more likely to stay where they have opportunities to advance.** Promotions can increase retention of high performers by increasing retention of all employees. A 1994 meta-analysis concluded that promotions increase retention among employees of all performance levels, a finding bolstered by numerous subsequent empirical investigations.<sup>43</sup> In the Swiss bank study noted above, after

controlling for pay growth and bonuses, researchers found that promotion rates decreased the likelihood of turnover across the board.<sup>44</sup> And in 2003, researchers surveyed 205 department salespeople and 197 insurance agents, finding that *perceptions* of advancement opportunities alone can contribute to employees' organizational commitment and lower their voluntary turnover.<sup>45</sup>

Managers at the 100 largest private and public organizations in Belgium have also highlighted the central importance of advancement opportunities to retention. Those surveyed indicated that a lack of advancement opportunities was one of the two most important reasons for voluntary turnover, along with pay, and that *satisfaction* with advancement opportunities played a significant role in employees' decisions to stay.<sup>46</sup>

While an organization's ability to increase pay is limited by fiscal realities, the ability to create or expand opportunities for career progress is more a matter of will than dollars and cents. Nearly half of those Belgian managers created advancement opportunities as a retention strategy, making it the second most widely used retention strategy, after increasing training and development.<sup>47</sup>

**High performers care more about advancement opportunities than low performers.** Research repeatedly suggests that advancement opportunities matter far more to high performers, and are thus a powerful tool for retaining them. For example, in a 2009 survey of 24,829 leisure and hospitality industry employees, the highest performers were nearly three times more likely than the lowest performers to cite advancement opportunities as a reason for staying with the organization.<sup>48</sup> Along the same lines, in the 2007 study of 2,510 former hospitality industry employees noted above, high performers rated the *lack* of advancement opportunity as critical to their decision to leave and significantly more important than all other factors besides pay.<sup>49</sup> Similarly, a survey measuring nurses' job satisfaction found that among those who planned to quit, high performers were less satisfied with promotion opportunities than low per-

## Examples in Action

At **Procter & Gamble**, a Fortune 500 company and manufacturer of consumer goods, new hires work with managers from the day they come on board to plan their career progression, building what the company refers to as “career development currency.” The company identifies and targets high-potential employees for advancement to “destination jobs,” through a series of well-defined steps that employees will take only if they continue to deliver exceptional performance. The attrition rate at Procter & Gamble, including retirements, is 7.5 percent, very low among business and professional organizations.<sup>51</sup>

**Fleet Bank**, a successful New England bank until later acquisition, regularly used promotions to increase retention among its higher performers. The company studied the practice using statistical modeling and determined that employees who had been promoted in the past year were 11 percent less likely to leave than similar employees who did not receive a promotion. Those who had been promoted within the past year were substantially less likely to leave even if they did not receive higher-than-average salary increases. The bank also found that its younger employees valued mobility within the firm even more highly than pay, which researchers suggest may have been because promotions promised better protection than savings in the event of layoffs.<sup>52</sup>

formers. Moreover, high performers who planned to quit were less satisfied with promotion opportunities than all nurses (both low and high performers) who planned to stay.<sup>50</sup>



## Design Flexible and Challenging Work Roles

High-performing employees who are challenged by their work are more likely to remain with an organization.<sup>53</sup> While promotions and career ladders signify forward movement or an upward climb, high-performing employees also value opportunities to step into new roles or take on new challenges, even if they do not involve linear advancement. High performers also respond to opportunities to customize work and tailor their jobs to their specific skills and interests. Organizations that challenge high performers, give them autonomy over their work, and align job responsibilities with what matters most to individual employees are more likely to retain their stars.

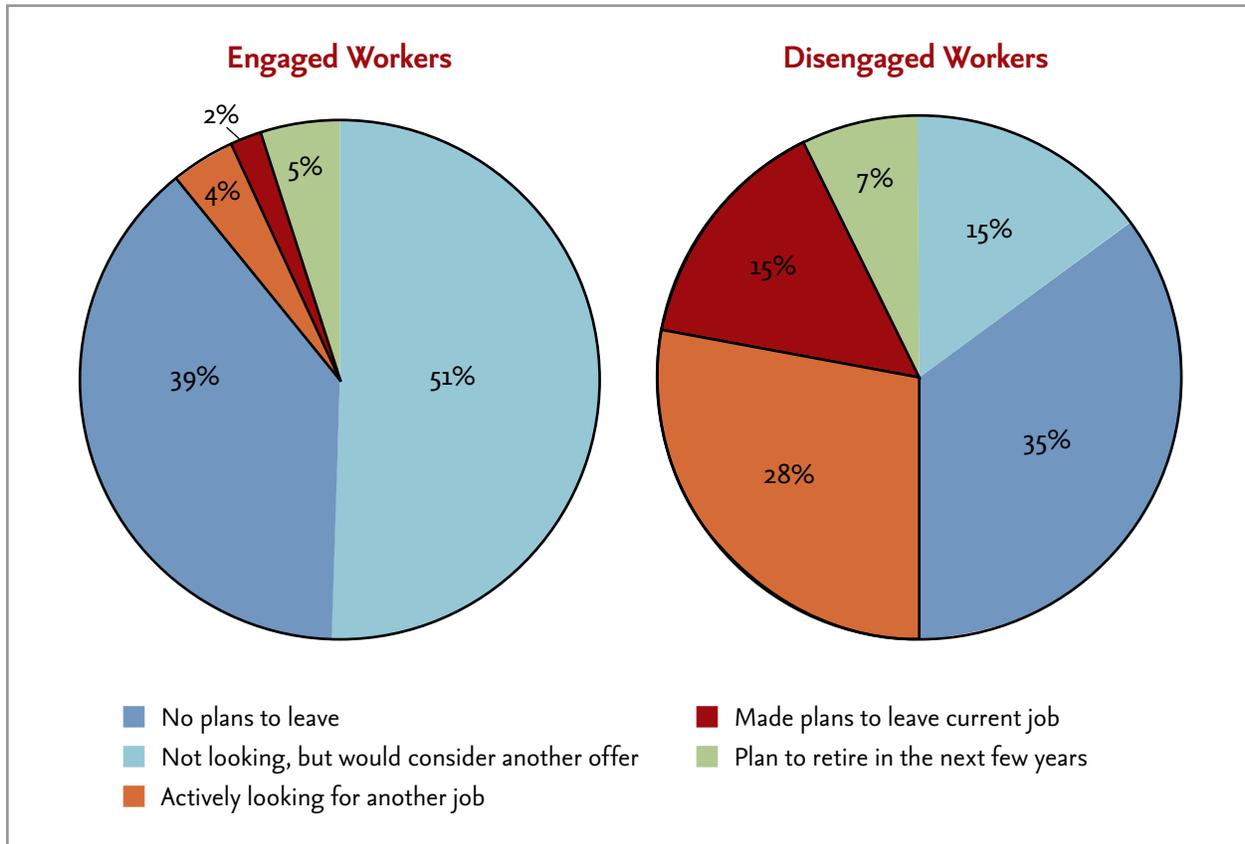
### 1. Offer challenging work

**How it works.** Organizations put into place systems that continually challenge employees to fully use their abilities, take on new work, or innovate as part of their assigned job duties. The challenge and the opportunity to demonstrate creativity increase engagement and retention of high performers.

**High performers stay where they have opportunities to shine . . .** Aside from pay and advancement opportunities, the job characteristic that high performers value most highly is the opportunity to use their skills. In the hospitality industry study noted above, researchers found that the opportunity to use skills topped benefits, work hours, and co-workers in its importance to high performers. High performers also valued the opportunity to use their skills significantly more than did their average and low-performing colleagues.<sup>54</sup>

**. . . and where they are fully engaged by their work.** Challenging work keeps high-performing employees engaged, which in turn can lead to higher retention.<sup>55</sup> “Engagement” has been defined as “the extent to which employees ‘go the extra mile’ and put discretionary effort into their work — contributing more of their energy, creativity and passion on the

FIGURE 3. Employee Retention by Level of Engagement



Source: Towers Perrin (2008). Towers Perrin assesses employee engagement levels based on responses to questions that measure connections to an organization across dimensions of engagement: rational, emotional, and motivational. Engaged workers scored highly in all three dimensions; disengaged workers scored poorly in all three dimensions.

job.”<sup>56</sup> A 2008 survey of nearly 90,000 employees at midsize to large organizations across a wide variety of industries and 18 countries found that doing exciting, challenging work was one of the most important drivers of employee engagement. And those who were most engaged in their work were far less likely than others to look for different jobs or plan to leave the organization.<sup>57</sup>

One way employers can keep their stars engaged is by involving them in the organizations’ most vexing challenges. Leaders from the Corporate Executive Board’s Corporate Leadership Council observed a large manufacturing organization, a global information services firm, and technology titan HP, and discovered that they all included rising stars in discussions about key strategic issues facing their busi-

nesses. This approach can help stars develop their own leadership skills and can also bring them into direct contact with senior leaders, improving engagement, organizational commitment, and retention.<sup>58</sup>

## 2. Tailor jobs to individual-specific needs

**How it works.** Companies tailor job design to high performers’ interests or existing skills, or give employees substantial autonomy and responsibility over their work. They build into work roles and job descriptions a flexibility that enables them to respond to high performers’ interests and talents. Catering to individual-specific characteristics makes it easier for employees to excel and grow without formal advancement, and also increases the employees’ sense of “fit” with the organization.

## Examples in Action

**General Electric**, a global infrastructure, finance, and media corporation, and **Goldman Sachs**, a global investment banking and securities firm, both use “stretch goals” to challenge and keep their highest performing managers. Stretch goals are those that managers do not know how to reach, and so require fresh thinking. These companies have found that stretch goals give high performers opportunities to work at peak creativity and efficiency, signal their value to the organization, and accelerate their individual development.<sup>59</sup>

**Google’s organization-wide policies** encourage developers to devote up to 20 percent of their time to noncore initiatives, with the specific goal of attracting and retaining high performers.<sup>60</sup> The company has also developed an algorithm using data from employee pay and promotion histories, performance reviews, and other information to determine who is most likely to leave. In part, the company uses the algorithm to identify high performers who feel underused, a key complaint of those who are thinking about leaving and therefore crucial information the company can use in targeted retention efforts.<sup>61</sup>

**Procter & Gamble** strategically places top performers in high-stress, “live-fire” roles. Managers look to fill these positions with rising stars who have adequate qualifications and excellent leadership skills, but who also have developmental gaps the positions can help fill. Through this program, the company keeps its highest performers engaged through challenging work while also preparing them for promotion and movement to leadership roles.<sup>62</sup>

## “Sculpting” jobs can retain high performers.

High performers want to be able to grow professionally without having to earn promotions or switch organizations. Research and case examples suggest that tailoring jobs to meet an employee’s interests and skills can therefore be a powerful strategy for high-performer retention. For example, a 1985 meta-analysis of 20 experiments dealing with attempts to reduce turnover, involving about 6,500 subjects, found job enrichment — reconfiguring a job to make it more satisfying — to be a strong retention strategy for all employees, including high performers.<sup>63</sup> In addition, a 2005 survey of 472 professionals from a large international engineering company found that employees of all performance levels preferred job enrichment — such as by structuring a manager’s role to give her more decision-making authority — even to lateral or vertical career moves.<sup>64</sup>

Customizing work assignments can also increase retention among high performers by aligning jobs with their interests, personalities, and passions.<sup>65</sup> A 2010 survey of 589 managerial and professional workers in a multinational East Asian company found job design to be correlated with high performers’ commitment to their organizations, where job design included job autonomy, the ability to set rules and goals for one’s work, and the level of challenge in the role.<sup>66</sup>

Many organizations have found that when they make it possible for high-performing employees to alter their job responsibilities, it becomes more likely that the employees will stay. A 2005 survey revealed that 80 percent of Fortune 500 companies have formal internal mobility programs in place specifically to improve retention rates. The vast majority of these companies (89 percent) prohibit low performers from using the programs.<sup>67</sup> Coca-Cola, Duke Power, and the Gap all encourage employees to change positions or roles within their organizations.<sup>68</sup> Other companies have started using “internal job boards” to assist high performers in finding new assignments within the organization instead of looking elsewhere. After Dow Chemical Co. started posting all job openings on an internal job board, internal job changes doubled and turnover in the company fell by half.<sup>69</sup>



## Build Lasting Teams

Employers frequently use hiring processes to determine a candidate's "fit" with the organization and predict who will add the most to the firm. But research suggests that it is also possible to use the hiring process to predict whether prospective employees will stay, enabling organizations to hire those they are more likely to retain. Organizations can also increase the odds of retention by conveying clear, accurate information to prospective hires about what working for the organization is like. Once new employees are on board, researchers have found that high performers want to work with other high performers. Organizations that assign work in ways that maximize that interaction, therefore, are more likely to retain their top talent.

### 1. Increase retention through smart hiring

**How it works.** Well-crafted hiring processes can serve three main purposes: enabling employers to identify candidates who are most likely to perform at high levels; identifying candidates who are least likely to leave the organization; and communicating an accurate impression of what it is like to work with the organization. Each of these increases the chance that new hires will choose organizations where they fit.

**Organizations can increase retention by hiring candidates who are more likely to stay.** Research suggests that much of the data available to employers during the hiring process can accurately predict employees' later voluntary turnover. In addition, some of the variables that accurately predict turnover — such as a candidate's job history, personal connections to the employer, and self-confidence — also accurately forecast job performance. As a result, organizations can use these variables to hire employees who are both more likely to perform at high levels and to stay.

In 2005, researchers studied the relationship of pre-hire variables and voluntary turnover in a sample of 445 job applicants at nonprofit and for-profit

organizations. A follow-up 2009 study by the same authors analyzed the issue with a group of 119 job applicants at a large financial company. In both studies, researchers found similar mixes of pre-hire variables that were predictive of employee's voluntary turnover. These included:

- ▶ *Biographical measures* — the length of time the employee spent in his or her prior job, number of jobs held in the past five years, number of friends and family in the organization, and whether the applicant was referred by an existing employee;
- ▶ *Dispositions* — the employee's self-confidence and decisiveness;
- ▶ *Pre-hire attitudes* — the employee's expressed desire for the job and overt intent to stay; and
- ▶ *Personality traits* — the employee's conscientiousness and emotional stability.<sup>70</sup>

All of these factors predicted employees' voluntary turnover within six months of hiring, across various types of organizations. The two personality traits, added in the 2009 study, continued to predict voluntary turnover for two more years.<sup>71</sup> Most of these variables were also connected to an employee's job performance: length of time in the most recent job, employee referrals, and the number of friends and family in the organization were found to accurately predict an employee's job performance in the first six months. In addition, the two personality traits predicted employees' job performance beyond the first six months.<sup>72</sup>

**Managing applicants' expectations can lower turnover rates.** Research suggests that retention can have a direct relationship to the employer's communication during the hiring process about the organization and the job.<sup>73</sup> When an employer offers applicants candid glimpses of the jobs and organization, their increased understanding of the position they are taking can reduce the chances of turnover later. These findings arose from a 1998 meta-analysis of 29 field studies and 11 laboratory studies, where the researcher found that realistic job previews presented before and immediately after hiring reduced volun-

## Examples in Action

**SAS Institute**, a large software firm, boasts a turnover rate of less than 4 percent, compared with an industry average of 22 percent.<sup>77</sup> SAS fills more than half of its job vacancies through employee referrals (23 percent) and internal promotions (28 percent).<sup>78</sup> The company has also developed data mining software, available for sale, to aid other companies in determining which employees are at greatest risk for voluntary turnover, the most significant reasons that cause employees to leave, and whether top performers are at risk of leaving.<sup>79</sup>

**Southwest Airlines** uses a hiring system that screens for employee “fit” using candidate performance on tests that were developed by observing existing employees’ behaviors. The company credited this hiring system with generating its very low turnover rate — consistently less than 5 percent, compared with an average turnover rate in the airline industry of 20 to 30 percent.<sup>80</sup>

**Capital One**, a financial services company and member of the Fortune 500, has a turnover rate of less than 10 percent. After years of experience, the company has concluded that employees who are recruited through its internal referral program are stronger applicants for new positions *and* tend to stay longer with the company. As a result, the company places a strong emphasis on its internal referral program, with almost half of new hires generated by employee referrals.<sup>81</sup>

Case studies indicate that coffee giant **Starbucks**, investment bank and securities firm **Goldman Sachs**, health food mecca **Whole Foods Market**, and retailer **The Container Store** all seek to provide realistic job previews to applicants or new hires to later improve retention. These companies have each developed programs to help good “fits” hit the ground running, while helping others self-select out of positions in which they would be unlikely to thrive.<sup>82</sup>

tary turnover.<sup>74</sup> Realistic job previews that occur after hiring are also effective at increasing an employee’s performance.<sup>75</sup> The more realistic a preview, the better prepared the applicant will be to jump into a job with eyes wide open, or to opt out before accepting a job and later departing based on unrealistic, unmet expectations.<sup>76</sup>

### 2. Group high performers together

**How it works.** Companies assemble teams of high performers, either to work jointly on projects or to serve different but mutually enhancing functions within the organization. Because high-performing employees prefer working with high-performing peers, this leads to stronger collective performance and lower turnover among high performers across the organization.

**Grouping high performers together improves retention *and* performance.** Stars perform better and are more likely to stay with their organization when they are surrounded by other high performers.<sup>83</sup> Companies often fall prey to the idea that you can be successful with one or two top performers — what a trio of scholars has called the “lone-star myth.”<sup>84</sup> But research and experience suggest that without the company of equally talented colleagues, high-performing employees are less likely to excel at their jobs or stick around for very long.<sup>85</sup> In particular, surrounding high performers with equally talented colleagues has the advantages of creating synergistic outcomes in team settings and enhancing the reputation of the organization, which can open doors and create greater access to outside resources.<sup>86</sup>

Using panel data on top-performing security ana-

lysts over a nine-year period, two researchers demonstrated that the quality of high performers' colleagues significantly affects the quality of their work. Their analysis suggests that high performers do not “own” their performance, even in knowledge-intensive work and with a history of strong past performance. Instead, the quality of their close colleagues most significantly affects their ability to maintain their performance.<sup>87</sup> Having other high performers on their team also significantly increases retention, as does having high performers in complementary roles within the organization.<sup>88</sup>

Google is perhaps the company best known for grouping high performers together as a targeted retention strategy. The company uses a rigorous hir-

Without the company of equally talented colleagues, high-performing employees are less likely to excel or stay in their jobs.

ing process to bring in only exceptionally talented employees, and then groups these individuals in small teams to work on complex issues. The company has based this strategy on its experience that hiring “mediocre” employees to work in small teams makes it more difficult — if not impossible — to attract and retain stars.<sup>89</sup>



# Additional Strategies for Retaining High Performers

## Organizational Characteristics that Affect Retention

The research and case studies from sectors outside education are replete with examples of strategies that significantly increase retention. The four strategies outlined above are the ones best supported by a robust research base that spans years and diverse organizational settings. Additional approaches, however, have shown some success and may be effective for retaining top talent in some organizations. We briefly outline each of these strategies below.

- ▶ **Enhance organizational prestige.** An organization's reputation in the community or relevant industry is more important to high performers than other employees. In an open-ended survey of 24,829 employees in the leisure and hospitality industry, researchers found that high performers cared far more about organizational prestige than low performers as a reason for staying with an organization.<sup>90</sup> Goldman Sachs has taken advantage of this perception to retain its highest performers by infusing its hiring process with a "culture of exclusivity" that helps the company appeal specifically to high performers.<sup>91</sup>
- ▶ **Train and mentor high performers.** When they are well-designed and carefully implemented, training and mentoring programs have been shown to decrease employee turnover, including among high performers. Using a 2005 survey of more than 1,000 Army officers, one group of researchers has found that mentoring, especially by supervisors, increased organizational commitment among military officers.<sup>92</sup> Similarly, a 2009 survey of 315 health-care employees showed that mentoring can significantly decrease turnover by building increased commitment among employees with mentors.<sup>93</sup> Among its many retention strategies, General Electric uses highly regarded training programs to reward high performers and put them

on the company's leadership track. According to GE leaders, the prestige combined with the training itself have made the programs a valuable tool for recruitment and retention.<sup>94</sup>

- ▶ **Provide lifestyle perks.** A natural outgrowth from the customized compensation packages mentioned above are "lifestyle perks"—various types of non-financial benefits—that can be used to retain stars whom an employer does not want to lose. The SAS Institute offers employees a unique set of benefits ranging from a fitness center and on-site childcare to free M&Ms on Wednesdays. The company also has a relaxed dress code and encourages employees to work 35-hour weeks. Researchers who have studied the company link the perks and the unique organizational culture they generate to the company's remarkably low turnover rate of less than 4 percent.<sup>95</sup>
- ▶ **Open lines of communication between employees and company leaders.** Finally, an organization's intentional efforts to foster transparency and clear communications throughout the company can improve employee retention. Essentially, when employees have ways to voice their opinions, they are more likely to resolve concerns or "feel heard," and thus decide to stay in their positions. This finding arose from an analysis of data from companies invited to submit applications for Fortune Magazine's "100 Best Companies to Work for in America," including organization-level questionnaires and employee attitude surveys. The researchers found that having an ombudsman, call hotline, complaint center, grievance process, and other processes for addressing perceived injustices helped mitigate increases in voluntary turnover.<sup>96</sup> Similar studies of the health care industry have found that high numbers of options for employees to voice dissatisfaction, receive constructive feedback, and change negative aspects of their work situations were associated with higher retention rates.<sup>97</sup>

## Go to the Mat for the Best Employees

The retention strategies discussed in this report are most commonly thought of as organization-wide initiatives. But retention efforts can also be focused more narrowly, on specific, well-defined groups of employees or even on individual high performers. In short, if any of the systemic strategies discussed above do not succeed in keeping a high-performing employee that the organization wishes to retain, employers will “go to the mat” to keep the individual.<sup>98</sup> This might involve higher compensation, a new job role or work assignment, a combination of “lifestyle perks” described above, or any number of other individualized approaches, based on what matters most to the employee.

The most successful organizations use both types of strategies — a combination of organization-wide techniques designed to maximize overall retention, together with focused strategies that enable managers to do what it takes — to give them the greatest chances of keeping stars.

## Prepare for Some Inevitable Departures

Turnover is inevitable. But organizations can still maximize the value they derive from stars — even when they leave. Today, companies in many industries increasingly accept the inevitability of turnover and supplement their traditional retention measures with an adaptability that allows them to respond effectively when top talent departs. Research and ex-

perience from across sectors yield four primary strategies that can help organizations successfully manage the inevitable departures of some of their stars.

### ► Retain relationships with departing stars.

Companies that remain on good terms with high performers after their departure can benefit long after employment ends. Strong relationships with successful former employees can yield formal or informal collaboration on projects and a positive portrayal of the organization among the former employee’s new colleagues and contacts.<sup>99</sup>

### ► Generate positive non-hires.

Applicants who are turned down for a job may later become the organization’s employees. They might also be future customers, either as individuals or as employees of suppliers, customers, or partners. Experience suggests that they will carry their hiring experience with them long into the future, so the more positive an organization can make the process and initial rejection, the more likely benefits are to accrue down the line.<sup>100</sup>

### ► Use post-employment contracting.

Organizations can use short-term contracts or project-based hiring to keep a high-performing employee who might otherwise leave the organization entirely.<sup>101</sup>

The best approach to high-performer retention may ultimately be a portfolio of initiatives that includes organization-wide policies, actions to keep individual high performers, and practices to maintain positive relationships with departing stars.<sup>102</sup>



# Applying Cross-Sector Lessons to K–12 Public Education

**K**eeping great teachers in education — and specifically in instructional roles — is a national imperative. Students without great teachers are far less likely to catch up with their U.S. peers and to make advanced progress like their international peers. Dropping the turnover rate among top-quartile teachers by half would mean an additional 750,000 students *each following year* could benefit from these teachers' gap-closing, bar-raising progress.<sup>103</sup> But how? Heeding lessons from other sectors that have taken high-performer retention seriously is essential. Our nation's children — and the great teachers who could serve them for many more years — cannot wait while we reinvent the wheel.

Applying the research and experience of other sectors to education, here are starting steps for education leaders who are serious about keeping great teachers:

## **Make high-performer retention a top priority.**

This is perhaps the most important lesson from other sectors. Targeted, vigorous efforts to retain the people who are the best in a critical job start with the *will* to make it happen. It must be a top priority for leadership and the organization at large. Although some states, districts, and schools today may try to keep better teachers, the level of effort and success does not match the urgency of the need. Clear, vocal leadership about the need to keep more of the best will help get everyone moving in the same direction and send the right message to great teachers.

**Set high-performer retention goals — and then measure success.** Setting specific retention goals — such as reducing top-teacher turnover by half, or more — and tracking progress openly will send strong signals to all that retaining great teachers is a priority. Measurement will require five tasks:

- ▶ *Measuring teacher effectiveness* using the best tools readily available. No organization has perfect measures, but using the best available makes sense;
- ▶ *Identifying the cutoff point that defines “top teachers”* in the current pool — at a minimum, those who achieve sufficient student learning progress to close achievement gaps and move children forward to advanced work. Overall, the top quartile of teachers in the United States today meet this bar,<sup>104</sup> but the portion will be less or more in different districts and schools;
- ▶ *Calculating baseline turnover rates* of top teachers;
- ▶ *Setting a specific goal for reduction of turnover rates* among top teachers; and
- ▶ *Measuring future retention rates* of top teachers.

These acts alone send a message that great teachers need to perceive: their exceptional contributions are valued. What's more, any determined principal, superintendent, school board, or state leader could take these steps tomorrow — *without* any major policy changes.

**Use retention tactics that do not require policy changes — right away.** Many of the high-performer retention strategies used in other sectors do not require significant policy changes to be implemented at the district, state, or national levels. Motivated leaders could implement these right now and start reaping immediate rewards for students. The possibilities vary according to current policies in each state and district. Leaders will find many options in the main body of this report. For example:

- ▶ *Design flexible and challenging work roles* that use the specific strengths of top teachers, without removing them from instruction. One enormous area of opportunity is using various means to

Any determined education leader could take steps to keep more great teachers right away — *without* major policy changes.

extend the instructional reach of great teachers to more students within their existing work settings. We do not cover all the possibilities here, but most schools could immediately reduce the noninstructional duties of the best teachers and use existing technology to provide rote elements of instruction, while shifting far more top-teacher time into personalized learning activities with more students.<sup>105</sup>

- ▶ *Build lasting teams.* This starts at hiring and extends to teachers' ongoing work. Schools and districts can immediately begin communicating the value of great teachers at the interview stage by telling them about the high performance expectations for all teachers and the extra opportunities available to great teachers. Openly conveying these values and opportunities will attract more top teachers from the start.

On the job, top teachers need opportunities to communicate and collaborate without fear of conveying their norm-breaking ambition. Leaders can create these opportunities formally or informally and can empower these groups with responsibility for high-value tasks, such as organizing materials all teachers need to achieve high progress with students, and professional development of other teachers.

- ▶ *Customize actions to retain individuals.* Whether a star teacher needs personal time for temporary family matters, coaching and development to reach more children effectively, or other custom-

ized solutions, education leaders can meet many of these needs within existing policies. Identifying and focusing on the changing needs of individual top teachers is the first step.

**Rebuild education policies to provide opportunities and rewards for our nation's great teachers — and the children they could serve.**<sup>106</sup>

Finally, we could do much more if we changed policies that block education leaders from providing opportunities to the best teachers. Current hiring, licensure, placement, tenure, pay, budgeting, and benefit policies — whether found in state laws, district policies, or collective bargaining agreements — have been designed to provide certainty for all teachers, rather than to provide opportunities for our highest performers. They often create barriers to providing the kind of retention-enhancing career opportunities and rewards that top performers disproportionately crave.

For example, pay and budget allocation practices make it nearly impossible to reward top teachers in proportion to their contributions and formally promote them within instructional roles. Although many new funding sources, both public and private, are offering temporary add-on money to pay for performance, these are likely short-lived solutions. Reslicing the compensation pie to allocate more money for teachers who achieve better results — especially for those who achieve them with more children — is a critical step for any state or district that wants to keep (and attract) more of the best over the long haul.<sup>107</sup>

We must retain public education's best teachers to improve our nation's schools. This report shares four key high-performer retention strategies that have succeeded in other sectors. It also explains several other tactics that may boost retention. By adopting and adapting these strategies in public education, administrators and policymakers will have a much better shot at keeping the best.

## Notes

1. B.C. Hassel and E.A. Hassel, *Opportunity at the Top: How America's Best Teachers Could Close Our Gaps, Raise the Bar, and Keep Our Nation Great* (Chapel Hill, NC: Public Impact, 2010). This is the number of children who would be taught by departing top-quartile teachers each subsequent year (about 1 million), minus the number taught by replacement teachers falling into the top quartile (about 250,000). Available: <http://www.opportunityculture.org>.

2. G.A. Strizek, *Characteristics of Schools, Districts, Teachers, Principals, and School Libraries in the United States: 2003–04 Schools and Staffing Survey* (Washington, DC: U.S. Department of Education, National Center for Education Statistics, 2006); J. Kowal, B.C. Hassel, and E.A. Hassel (Public Impact), *Financial Incentives for Hard-To-Staff Positions: Cross-Sector Lessons for Public Education* (Washington, DC: Center for American Progress, 2008). Available: [http://www.americanprogress.org/issues/2008/11/pdf/hard\\_to\\_staff.pdf](http://www.americanprogress.org/issues/2008/11/pdf/hard_to_staff.pdf).

3. Ibid.; B. Miner, "Teaching's Revolving Door," in *Keeping Quality Teachers Teaching: A special collection on teacher recruitment, retention, and quality* (Milwaukee, WI: Rethinking Schools, Ltd., 2009) 6–10. Available: [http://www.rethinkingschools.org/static/special\\_reports/quality\\_teachers/KeepingTeachersReport.pdf](http://www.rethinkingschools.org/static/special_reports/quality_teachers/KeepingTeachersReport.pdf).

4. Hassel and Hassel (2010).

5. R. Ingersoll and J.M. Kralik, *The Impact of Mentoring on Teacher Retention: What the Research Says* (Education Commission of the States, 2004). Available: <http://www.ecs.org/clearinghouse/50/36/5036.htm>.

6. In 2008, the quit rate (voluntary turnover exclusive of retirement and transfers to other locations) in the educational services industry was 13.0 percent, less than half the rate for professional and business services (29.2 percent). "Job Openings and Labor Turnover Study," Bureau of Labor Statistics. Available: <http://www.bls.gov/jlt/data.htm>. Numerous studies indicate even lower rates of teacher turnover, finding that between 7.5 and 9 percent of teachers leave the profession every year. R. Chait and R. Miller, *Teacher Turnover, Tenure Policies, and the Distribution of Teacher Quality: Can High-Poverty Schools Catch a Break?* (Washington, DC: Center for American Progress, 2009). Available: [http://www.americanprogress.org/issues/2008/12/pdf/teacher\\_attrition.pdf](http://www.americanprogress.org/issues/2008/12/pdf/teacher_attrition.pdf); National Council on Teaching Quality and U.S. Department of Education, International Affairs Office, *Attracting, Developing, and Retaining Effective Teachers: Background Report for the United States* (Washington, DC: U.S. Department of Education, 2008). Available: <http://>

[www.oecd.org/dataoecd/18/52/33947533.pdf](http://www.oecd.org/dataoecd/18/52/33947533.pdf); B.A. Jacobs, "The Challenges of Staffing Urban Schools with Effective Teachers," *The Future of Children*, 17, 1 (2007) 129–153. Available: [http://www.futureofchildren.org/futureofchildren/publications/docs/17\\_01\\_07.pdf](http://www.futureofchildren.org/futureofchildren/publications/docs/17_01_07.pdf).

7. M.R. West and M.M. Chingos, "Teacher Effectiveness, Mobility, and Attrition in Florida," in M.G. Springer (ed.), *Performance Incentives: Their Growing Impact on American K–12 Education* (Washington, DC: Brookings Institution, 2009). Available: [http://www.people.fas.harvard.edu/~chingos/West-Chingos\\_prepub.pdf](http://www.people.fas.harvard.edu/~chingos/West-Chingos_prepub.pdf); D. Boyd, P. Grossman, H. Lankford, S. Loeb, and J. Wyckoff, *Who Leaves? Teacher Attrition and Student Achievement*, 2007. Available: [http://irepp.stanford.edu/publications/documents/wp\\_Do\\_Effective\\_Teachers\\_Leave.pdf](http://irepp.stanford.edu/publications/documents/wp_Do_Effective_Teachers_Leave.pdf); D. Goldhaber, B. Gross, and D. Player, *Are Public Schools Really Losing Their "Best"? Assessing the Career Transitions of Teachers and Their Implications for the Quality of the Teacher Workforce* (Seattle, WA: CRPE Working Paper #2007\_2, 2007). Available: [http://www.crpe.org/cs/crpe/download/csr\\_files/wp\\_crpe2\\_ttlosingbest\\_sept07.pdf](http://www.crpe.org/cs/crpe/download/csr_files/wp_crpe2_ttlosingbest_sept07.pdf); E.A. Hanushek, J.F. Kain, D.M. O'Brien, and S.G. Rivkin, *The Market for Teacher Quality* (paper prepared in 2004 for the American Economic Association Meeting: Philadelphia, January 6–8, 2005). Available: [http://www.aeaweb.org/annual\\_mtg\\_papers/2005/0107\\_0800\\_0803.pdf](http://www.aeaweb.org/annual_mtg_papers/2005/0107_0800_0803.pdf); J.M. Krieger, "Teacher Quality and Attrition," *Economics of Education Review*, 25 (2004), 13–27. Also see B.C. Hassel and E.A. Hassel, *Opportunity at the Top: How America's Best Teachers Can Close the Gaps, Raise the Bar, and Keep Our Nation Great* (Chapel Hill, NC: Public Impact, 2010) for a discussion of the effects of losing the best teachers.

8. The New Teacher Project, *The Widget Effect: Our National Failure to Acknowledge and Act on Differences in Teacher Effectiveness* (New York: The New Teacher Project, 2009).

9. Hassel and Hassel (2010). This is the number of children who would be taught by departing top-quartile teachers each subsequent year (about 1 million), minus the number taught by replacement teachers falling into the top quartile (about 250,000).

10. D.G. Allen, *Retaining Talent: A Guide to Analyzing and Managing Employee Turnover* (Alexandria, VA: SHRM Foundation, 2008); T.R. Mitchell, B.C. Holtom, and T.W. Lee, "How to keep your best employees: Developing an effective retention policy," *The Academy of Management Executive*, 15, 4 (2001) 96–109. Also see G. Barnes, E. Crowe, and B. Schaefer, *The Cost of Teacher Turnover in Five School Districts: A Pilot Study* (National Commission on Teaching and America's Future, 2007). Available: <http://www.nctaf>

.org/resources/demonstration\_projects/turnover/documents/CTTFullReportfinal.pdf.

11. I.T. Robertson and M. Smith, "Personnel selection," *Journal of Occupational and Organizational Psychology*, 74 (2001) 441–472; L.M. Spencer, D.C. McClelland, and S.M. Spencer, *Competency Assessment Methods: History and State of the Art* (Hay/McBer Research Press, 1992).

12. Hay Group (2010). *The Changing Face of Reward*. Available: [http://www.haygroup.com/Downloads/ca/misc/Global\\_report\\_changing\\_face\\_of\\_reward.pdf](http://www.haygroup.com/Downloads/ca/misc/Global_report_changing_face_of_reward.pdf).

13. Public Impact's forthcoming report *Seizing Opportunity at the Top: How America's Best Teachers Can Close the Gaps, Raise the Bar, and Keep Our Nation Great* provides comprehensive, integrated policy solutions for building human capital systems — including retention practices — for high performers. See <http://OpportunityCulture.org>.

14. C.O. Trevor, B. Gerhart, and J. Boudreau, "Voluntary Turnover and Job Performance: Curvilinearity and the Moderating Influences of Salary Growth and Promotions," *Journal of Applied Psychology*, 82, 1 (1997) 44–61; A. Salamin and P.W. Hom, "In Search of the Elusive U-Shaped Performance-Turnover Relationship: Are High Performing Swiss Bankers More Liable to Quit?" *Journal of Applied Psychology*, 90, 6 (2005) 1204–1216; C.R. Williams and L.P. Livingstone, "Another Look at the Relationship between Performance and Voluntary Turnover," *The Academy of Management Journal*, 37, 2 (1994) 269–298.

15. K. Kwon, J. Bae, and J.J. Lawler, "High Commitment HR Practices and Top Performers," *Management International Review*, 50, 1 (2010); R.D. Banker, S.Y. Lee, G. Potter, and D. Srinivasan, "An empirical analysis of continuing improvements following the implementation of a performance-based compensation plan," *Journal of Accounting and Economics*, 30 (2001) 315–350; D.A. Harrison, M. Virick, and S. William, "Working Without a Net: Time, Performance, and Turnover Under Maximally Contingent Rewards," *Journal of Applied Psychology*, 81, 4 (1996) 331–345.

16. C.O. Trevor, J.P. Hausknecht, and M.J. Howard, *Why High and Low Performers Leave and What They Find Elsewhere: Job Performance Effects on Employment Transitions* (Ithaca, NY: Cornell University, Center for Advanced Human Resource Studies (CAHRS) Working Paper Series, Working Paper 07–11, 2007). Available: <http://digitalcommons.ilr.cornell.edu/cahrswp/466/>; T.R. Zenger, "Why Do Employers Only Reward Extreme Performance? Examining the Relationships Among Performance, Pay, and Turnover," *Administrative Science Quarterly*, 37, 2 (1992) 198–219; M.C. Sturman, C.O. Trevor, J. Boudreau, and B. Gerhart, "Is it worth it to win the talent war? Using turnover research to evaluate the utility of performance-based pay," *Personnel*

*Psychology*, 56 (2003) 997–1035; J. Bouwens and L. van Lent, *Effort and Selection Effects of Incentive Contracts* (Tilburg University Discussion Paper No. 2003–130, 2003). Available: <http://arno.uvt.nl/show.cgi?fid=10503>; J.L.Y. Ho, A. Wu, and C. Lee, "How Changes in Compensation Plans Affect Employee Performance, Recruitment and Retention — An Empirical Study of a Car Dealership," *Contemporary Accounting Research*, 26, 1 (2009) 167–199; Williams and Livingstone (1994); Banker et al. (2001); Harrison et al. (1996).

17. "Driven to distraction: Two and a half cheers for sticks and carrots," *The Economist*, January 2010.

18. Williams and Livingstone (1994). The meta-analysis also suggests that this pattern persists in good and bad economic times — the availability of job alternatives has little impact on links between performance and retention.

19. Trevor et al. (1997). Also see Sturman et al. (2003).

20. Harrison et al. (1996).

21. Bouwens and van Lent (2003).

22. Salamin and Hom (2005).

23. Zenger (1992); Sturman et al. (2003); Ho et al. (2009).

24. Williams and Livingstone (1994).

25. Trevor et al. (1997). Also see Sturman et al. (2003).

26. Zenger (1992).

27. Trevor et al. (1997).

28. M. Beer and M.D. Cannon, "Promise and Peril in Implementing Pay-For-Performance," *Human Resource Management*, 43, 1 (Spring 2004) 3–48; D. Eskew, R.L. Heneman, and M. Fisher, "A Survey of Merit Pay Plan Effectiveness: End of the Line for Merit Pay or Hope for Improvement?" *Human Resources Planning*, 19, 2 (1996) 12–19; Zenger (1992); B. Dowling and R. Richardson, "Evaluating Performance-Related Pay for Managers in the National Health Service," *The International Journal of Human Resource Management*, 8, 3 (1997); C.M. Lowery, N.A. Beadles II, M.M. Petty, G.M. Amsler, and J.W. Thompson, "An Empirical Examination of a Merit Bonus Plan," *Journal of Managerial Issues*, 14, 1 (2002) 100–117. See also E.A. Hassel and B.C. Hassel (Public Impact), *Improving Teaching through Pay for Contribution* (Washington, DC: NGA Center for Best Practices, 2007).

29. Salamin and Hom (2005).

30. Zenger (1992).

31. H.R. Nalbantian and A. Szostak, "How Fleet Bank Fought Employee Flight," *Harvard Business Review*, 82, 4 (April 2004) 116–125.

32. R.D. Shapiro, M.D. Watkins, and S. Rosegrant, *Measure of Delight: The Pursuit of Quality at AT&T Universal Card Services* (Boston, MA: Harvard Business School Publishing, 1993).

33. G. Hamel and B. Breen, "Aiming for an Evolutionary

- Advantage,” in *The Future of Management* (Boston, MA: Harvard Business School Press, 2007); D. Pink, *Drive* (New York: Penguin Group Inc., 2009); “Driven to distraction” (2010).
34. A.C. Bluedorn, “Managing Turnover Strategically,” *Business Horizons*, 25, 2 (1982) 7–12.
  35. Trevor et al. (1997).
  36. Kwon et al. (2010).
  37. F.M. Horwitz, C.T. Heng, and H.A. Quazi, “Finders, keepers? Attracting, motivating and retaining knowledge workers,” *Human Resource Management Journal*, 13, 4 (2003) 23–44.
  38. Trevor et al. (2007).
  39. Trevor et al. (1997).
  40. See P. Cappelli, “A Market-Driven Approach to Retaining Talent,” *Harvard Business Review on Finding and Keeping the Best People*, (Boston, MA: Harvard Business School Press, 2001) 27–50.
  41. *Attracting and Retaining Talent: Building an Exceptional Employee Base* (Deloitte, 2005); *It’s 2010: Where is your retention strategy?* (Deloitte, 2010). Podcast available: [http://www.deloitte.com/view/en\\_GX/global/insights/podcasts/deloitte-global-insights/a0e8147aa8176210VgnVCM100000ba42f00aRCRD.htm](http://www.deloitte.com/view/en_GX/global/insights/podcasts/deloitte-global-insights/a0e8147aa8176210VgnVCM100000ba42f00aRCRD.htm).
  42. F. Herzberg, “One more time: How do you motivate employees?” *Harvard Business Review* (January-February 1968) 53–62.
  43. P.P. Carson, K.D. Carson, K.D., R.W. Griffeth, and R.P. Steel, “Promotion and Employee Turnover: Critique, Meta-Analysis, and Implications,” *Journal of Business and Psychology*, 8, 4 (1994) 455–466; Salamin and Hom (2005), citing: Carson et al. (1994); M. Elvira and L. Cohen, “Location matters: A cross-level analysis of the effects of organizational sex composition on turnover,” *Academy of Management Journal*, 44 (2001) 591–605; R.W. Griffeth, P. Hom, and S. Gaertner, “A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium,” *Journal of Management*, 26 (2000) 463–488; K. Lyness and M. Judiesch, “Are female managers quitters? The relationships of gender, promotions, and family leaves of absence to voluntary turnover,” *Journal of Applied Psychology*, 86 (2001) 1167–1178; and S. Malos and M. Campion, “Human resource strategy and career mobility in professional services firms: A test of an options-based model,” *Academy of Management Journal*, 43 (2000) 749–760.
  44. Salamin and Hom (2005), p. 1209. However, *multi-level* promotions increased departures.
  45. D.G. Allen, L. Shore, and R.W. Griffeth, “The role of perceived organizational support and supportive human resource practices in the turnover process,” *Journal of Management*, 29 (2003) 99–118.
  46. A. De Vos, A. Meganck and D. Buyens, *The role of the psychological contract in retention management: Confronting HR-managers’ and employees’ views on retention factors and the relationship with employees’ intentions to stay* (Vlerick Leuven Gent Management School Working Paper Series 2005–5, 2006). Available: <http://www.vlerick.com/en/2623-VLK/version/default/part/AttachmentData/data/vlgms-wp-2005-5.pdf>.
  47. De Vos et al. (2006).
  48. J.P. Hausknecht, J. Rodda, and M.J. Howard, “Targeted Employee Retention: Performance-based and Job-related Differences in Reported Reasons for Staying,” *Human Resource Management*, 48, 2 (2009) 269–288. The authors define “advancement opportunities” as “the amount of potential for movement to higher levels within the organization.”
  49. Trevor et al. (2007).
  50. R.P. Steel, R.W. Griffeth, P.W. Hom, and D.M. Lyons, “Practical retention policy for the practical manager,” *Academy of Management Executive*, 16, 2 (2002) 149–164, citing Griffeth and Hom (2001). Also see Trevor et al. (2007), suggesting that promotions can *increase* voluntary turnover because they are “positive signals” on the job market that make it easier for those who receive them to find favorable employment alternatives. But even this study found that promotions prompted more low performers than high performers to leave.
  51. D.A. Ready and J.A. Conger, “Make Your Company a Talent Factory,” *Harvard Business Review* (June 2007), 69–77. In 2007, the quit rate (voluntary turnover exclusive of retirement and transfers to other locations) in professional and business services was 32.3 percent. Bureau of Labor Statistics. “Job Openings and Labor Turnover Study.” Available: <http://www.bls.gov/jlt/data.htm>.
  52. Nalbantian and Szostak (2004), p. 120.
  53. Towers Perrin, *Closing the Engagement Gap: A Road Map for Driving Superior Business Performance* (Towers Perrin Global Workforce Study, 2007–2008); P. Cappelli, *Talent on Demand: Managing Talent in an Age of Uncertainty* (Boston, MA: Harvard Business Press, 2008a); Trevor et al. (2007).
  54. Trevor et al. (2007).
  55. J. Martin and C. Schmidt, “How to Keep Your Top Talent,” *Harvard Business Review* (May 2010); Towers Perrin Global Workforce Study (2007–2008).
  56. Towers Perrin Global Workforce Study (2007–2008).
  57. Towers Perrin Global Workforce Study (2007–2008).
  58. Martin and Schmidt (2010).

59. S. Kerr and S. Landauer, "Using stretch goals to promote organizational effectiveness and personal growth: General Electric and Goldman Sachs," *Academy of Management Executive*, 18, 4 (2004) 134–138.
60. Hamel and Breen (2007).
61. S. Morrison, "Google searches for staffing answers," *The Wall Street Journal* (May 19, 2009), p. B1. A.R. McIlvaine, "Predicting Retention," *Human Resource Executive Online* (2009). Available: <http://www.hreonline.com/HRE/story.jsp?storyId=222889575>.
62. Martin and Schmidt (2010).
63. G.M. McEvoy and W.F. Cascio, "Strategies for Reducing Employee Turnover: A Meta-analysis," *Journal of Applied Psychology*, 70, 2 (1985) 342–353; Steel et al. (2002).
64. A. De Vos, K. Dewettinck, and D. Buyens, "To Move or Not To Move? The Relationship between Career Management and Preferred Career Moves," *Employee Relations*, 30, 2 (2008) 156–175.
65. T. Butler and J. Waldroop, "Job Sculpting: The Art of Retaining Your Best People," *Harvard Business Review* (September-October 1999). Also see Cappelli (2001); N. Moffitt, "Managing Without Commitment: Wharton's Peter Cappelli and The New Deal—Or Is It a Raw Deal—At Work," *Wharton Alumni Magazine* (Winter 2001); S. Ramlall, "A Review of Employee Motivation Theories and their Implications for Employee Retention within Organizations," *Journal of American Academy of Business*, 5, 1 (2004) 52–63; M. Guthridge, J.R. McPherson, and W.J. Wolf, "Upgrading Talent: A downturn can give smart companies a chance to upgrade their talent," *The McKinsey Quarterly* (December 2008); M. Guthridge, A.B. Komm, and E. Lawson, "Making talent a strategic priority," *The McKinsey Quarterly* (January 2008) 49–59.
66. Kwon et al. (2010).
67. P. Cappelli, "Managing an Internal Market to Match Talent to Jobs," in *Talent on Demand: Managing Talent in an Age of Uncertainty* (Boston, MA: Harvard Business Press, 2008a) 205–228.
68. Cappelli (2008a) at 210.
69. Cappelli (2008a) at 213.
70. M.R. Barrick and R.D. Zimmerman, "Reducing voluntary, avoidable turnover through selection," *Journal of Applied Psychology*, 90, 1 (2005), 159–166; M.R. Barrick and R.D. Zimmerman, "Hiring for Retention and Performance," *Human Resource Management*, 48, 2 (2009) 183–206. The variable involving number of jobs held in the past five years was used only in the 2009 study. Other researchers reached analogous conclusions in their meta-analysis of these and other factors for *current* employees (as opposed to job applicants). R.W. Griffith, P.W. Hom, and S. Gaertner, "A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium," *Journal of Management*, 26, 3 (2000) 463–488. Also see P.W. Hom and R.W. Griffith, *Employee Turnover* (Cincinnati: South-Western Publishing, 1995), and T.W. Lee, S.J. Ashford, J.P. Walsh, and R.T. Mowday, "Commitment propensity, organizational commitment, and voluntary turnover: A longitudinal study of organizational entry processes," *Journal of Management*, 10, 1 (1992) 15–32 (discussed in Barrick and Zimmerman (2005)).
71. Barrick and Zimmerman (2005); Barrick and Zimmerman (2009).
72. Barrick and Zimmerman (2009).
73. T.J. Erickson and L. Gratton, "What It Means to Work Here," *Harvard Business Review* (March 2007); R.P. Finnegan, "Narrow the Front Door to Close the Back Door," in *Rethinking Retention in Good Times and Bad: Breakthrough Ideas for Keeping Your Best Workers* (Boston, MA: Davies-Black, 2010).
74. J.M. Phillips, "Effects of Realistic Job Previews on Multiple Organizational Outcomes: A Meta-Analysis," *Academy of Management Journal*, 41, 6 (1998) 673–690. Also see B.J. Morse and P.M. Popovich, "Realistic recruitment practices in organizations: The potential benefits of generalized expectancy calibration," *Human Resource Management Review*, 19 (2009) 1–8.
75. Phillips (1998).
76. Morse and Popovich (2009); Finnegan (2010).
77. J. Pfeffer, *The SAS Institute: A Different Approach to Incentives and People Management Practices in the Software Industry* (Stanford Case Study #HR-6, 1998); J. Pfeffer, "The SAS Institute: Succeeding with Old-Fashioned Values in a New Industry," in C.A. O'Reilly and J. Pfeffer (eds.), *Hidden Values: how great companies achieve extraordinary results with ordinary people* (Boston, MA: Harvard Business School Press, 2000); "SAS ranks No. 1 on FORTUNE 'Best Companies to Work For' list in America" (SAS Press Release, January 21, 2010). Available: <http://www.sas.com/news/preleases/2010fortuneranking.html>.
78. Pfeffer (1998), Exhibit 3.
79. SAS company website: "How to predict if your best employees are about to walk out the door." Available: <http://www.sas.com/success/carige.html>.
80. S.J. Miles and W.G. Mangold, "Positioning Southwest Airlines through employee branding," *Business Horizons*, 48 (2005) 535–545.
81. N. Stein, "Winning the War to Keep Top Talent," *Fortune Magazine* (May 2000).
82. Erickson and Gratton (2007).
83. B. Groysberg, L. Lee, and R. Abrahams, "The Myth

of the Lone Star: Why One Top Performer May Not Shine as Brightly as You Hope,” *The Wall Street Journal* (March 23, 2009) p. R4; B. Groysberg and L. Lee, “The effects of colleague quality on top performance: the case of security analysts,” *Journal of Organizational Behavior*, 29, 8 (2008) 1123–1144; B. Groysberg and L. Lee, “Star power: colleague quality and turnover,” *Industrial and Corporate Change* (ICC Advance Access published online on February 8, 2010); Hamel and Breen (2007).

84. Groysberg, Lee, and Abrahams (2009).

85. Groysberg, Lee, and Abrahams (2009).

86. Groysberg, Lee, and Abrahams (2009).

87. Groysberg and Lee (2008).

88. Groysberg and Lee (2010). The authors found that a one standard deviation increase in the quality of expertise-group colleagues (those working in the same or a similar area of expertise) decreased turnover by 7.8 percent, while a one standard deviation increase in the quality of colleagues managing the client interface decreased turnover by 22 percent.

89. Hamel and Breen (2007).

90. Hausknecht et al. (2009).

91. Stein (2000).

92. S. Payne and A.H. Huffman, “A Longitudinal Examination of the Influence of Mentoring on Organizational Commitment and Turnover,” *Academy of Management Journal*, 48, 1 (2005) 158–168. Also see M.M. Fleig-Palmer, “The Impact of Mentoring on Retention through Knowledge Transfer, Affective Commitment, and Trust,” (Dissertation presented to the Faculty of the Graduate College at the University of Nebraska, 2009). Available: <http://digitalcommons.unl.edu/businessdiss/4>; and M.J. Lankau and T.A. Scandura, “An investigation of personal learning in mentoring relationships: Content, antecedents, and consequences,” *Academy of Management Journal*, 45, 4 (2002) 779–790 (cited in Fleig-Palmer (2009) at 72).

93. Fleig-Palmer (2009). While mentoring can significantly decrease turnover by building commitment among employees with mentors, this study found that the effect may be offset somewhat by the transfer of knowledge from mentor to protégé, which increases the protégé’s job marketability.

94. See D. Brady, “Secrets of an HR Superstar,” *BusinessWeek* (April 9, 2007). Interview with Bill Conaty, General Electric’s head of human resources.

95. J. Schu, “Even in Hard Times, SAS Keeps Its Culture Intact,” *Workforce* (2001). Available: [http://findarticles.com/p/articles/mi\\_moFXS/is\\_10\\_80/ai\\_79352422/](http://findarticles.com/p/articles/mi_moFXS/is_10_80/ai_79352422/); Pfeffer (1998).

96. C.O. Trevor and A.J. Nyberg, “Keeping Your Head-

count When All About You are Losing Theirs: Downsizing, Voluntary Turnover Rates, and the Moderating Role of HR Practices,” *The Academy of Management Journal*, 51, 2 (2008) 259–276.

97. D.G. Spencer, “Employee Voice and Employee Retention,” *The Academy of Management Journal*, 29, 3 (1986) 488–502; J. Mayfield and M. Mayfield, “The Effects of Leader Communication on a Worker’s Intent to Stay: An Investigation Using Structural Equation Modeling,” *Human Performance*, 20, 2 (2007) 85–102.

98. Steel et al. (2002).

99. See Cappelli (2008a); P. Cappelli, “Getting right people for the job,” *The Times of India, Mumbai* (March 18, 2008b), “Talent on Demand: Applying Supply Chain Management to People,” *Knowledge@Wharton* (February 20, 2008), interview with Peter Cappelli; D. Somaya and I.O. Williamson, “Rethinking the ‘War for Talent.’” *MIT Sloan Management Review*, 49, 4 (2008) 29–34.

100. See Cappelli (2008a); Cappelli (2008b); Somaya and Williamson (2008).

101. See Cappelli (2008a); Cappelli (2008b); Somaya and Williamson (2008).

102. See Somaya and Williamson (2008).

103. Hassel and Hassel (2010).

104. For example, see Robert Gordon, Thomas Kane, and Douglas O. Staiger; *Identifying Teacher Performance on the Job* (Washington, DC: The Brookings Institution, 2006).

105. See E.A. Hassel and B.C. Hassel, *3X for All: Extending the Reach of Education’s Best* (Chapel Hill, NC: Public Impact, 2009) for more examples of how the reach of top teachers could be extended to more children. Available: [http://publicimpact.com/images/stories/3x\\_for\\_All\\_2010.pdf](http://publicimpact.com/images/stories/3x_for_All_2010.pdf).

106. Visit <http://opportunityculture.org> for Public Impact’s collection of resources on these issues, including the report *Seizing Opportunity at the Top* (Forthcoming, 2010), containing a complete policy prescription aimed at building opportunities in public education for great teachers to achieve more, affect more children, and garner commensurate rewards.

107. For a review of research on teacher compensation reform, see Matthew Springer, ed., *Performance Incentives: Their Growing Impact on American K–12 Public Education* (Washington, DC: The Brookings Institution Press, 2010). On using existing resources to reward great teachers, see B.C. Hassel and E.A. Hassel, *Re-slicing the Teacher Compensation Pie* (Chapel Hill, NC: Public Impact, 2009). Available: [http://publicimpact.com/~publicit/publications/Public\\_ImpactRe-SlicingtheTeacherCompensationPie.pdf](http://publicimpact.com/~publicit/publications/Public_ImpactRe-SlicingtheTeacherCompensationPie.pdf).