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New Teachers and the Massachusetts Signing Bonus: The Limits of Inducements

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In 1998, Massachusetts instituted a \$20,000 Signing Bonus to address concerns about the supply of quality teachers. This article reports on a longitudinal, qualitative study of the experiences of 13 of the original 59 recipients of the Signing Bonus, and analyzes their responses to various incentives embedded within the Massachusetts Signing Bonus Program (MSBP). Interviews revealed that the bonus money had very little influence on recipients' decisions to enter teaching. Far more important was the alternate certification program created to implement the policy. Findings suggest that the MSBP: (a) relied too much on inducements and not enough on capacity-building; (b) focused too narrowly on recruitment and not enough on retention, and (c) centered too much on individuals and not enough on schools.

Keywords: *incentives, new teachers, pay, policy instruments, teacher recruitment, teacher retention*

WITHIN the current decade, U.S. public schools will hire over two million new teachers to serve a growing number of students, replace a large cohort of retiring teachers, and implement class-size reduction policies (Hussar, 1999). In response to projected teacher shortages, a number of school districts and a few states have begun experimenting with signing bonuses to attract new recruits. Houston, for example, has given new recruits signing bonuses of up to \$5,000; Los Angeles has offered bilingual teachers a bonus of \$5,000; Dallas has provided bonuses of \$4,500, along with extensive health insurance and stipends for classroom supplies; and the state of Nevada has offered \$2,000 signing bonuses

(Bryant, 2002; Ferdinand, 1998; Gewertz, 2001; Schemo, 2002).

In 1998, Massachusetts garnered national attention for instituting a \$20,000 Signing Bonus. Established in response to high failure rates on the state's new teacher licensure test, the Massachusetts Signing Bonus Program (MSBP) created financial incentives to "encourage high achieving candidates to enter the profession who would otherwise not consider a career in teaching" (Massachusetts State Legislature, 1998). The unprecedented size of the Signing Bonus put Massachusetts on the map as a state taking bold action to address concerns about teacher quality and expected teacher shortages.

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After four years, the MSBP might, at first, appear to have achieved its stated goal. Nearly 4,000 candidates in forty states and eight countries have applied for the program since its inception (Massachusetts Department of Education, 2002). As a group, the Signing Bonus recipients have had impressive backgrounds and diverse professional experiences prior to entering the teaching profession. However, our longitudinal, qualitative study of the Signing Bonus recipients' experiences reveals a less encouraging, more complicated picture of this seeming success.

Between 1999 and 2002, we and fellow researchers at the Project on the Next Generation of Teachers followed the careers of 13 of the first 59 Signing Bonus recipients, seeking to understand their perceptions of, and responses to, the various incentives embedded in the program. We explored the following questions: What role did the Signing Bonus play in the recipients' decisions to enter public school teaching? What role has the bonus played in their subsequent career decisions?

Our findings suggest that the Signing Bonus has not operated in the ways policy designers assumed it would. First, while those who created the program expected that an extra \$20,000 over four years would be a powerful incentive to attract people who had not seriously considered teaching, participants in our study reported that the bonus money had very little influence on their decisions to enter teaching. Rather, they responded to the program's accelerated route to certification, which provided quick access to a paid teaching position. Their accounts reveal that the chance to avoid the costs of traditional teacher preparation—both the costs of tuition and the opportunity costs of completing course work and student teaching—played a far bigger role than the bonus payments in their decisions to enter teaching through the MSBP. In addition, all but one of the respondents had seriously considered teaching prior to receiving the Signing Bonus, and ten out of the thirteen had already taken steps (both large and small) toward the profession.

Second, although the Signing Bonus was paid out over four years to encourage retention, we found that the bonus payments played virtually no role in participants' decisions about whether (or for how long) to stay in public school teaching or in Massachusetts. Instead, working condi-

tions at the school site, which affected the new teachers' ability to realize the intrinsic rewards that they expected of teaching, played the biggest role in their decisions.

These findings highlight the importance of considering both intrinsic and extrinsic rewards in designing programs and policies to recruit and retain new teachers. Many Signing Bonus recipients left teaching within four years, despite receiving what was publicly perceived to be a large extrinsic reward. As of Summer 2002, 8 of the 13 Bonus recipients in our study had already left public school teaching in Massachusetts, and thus never collected the full bonus payment. Based on his review of state records, Fowler (2003) found a similarly high level of attrition among the first cohort of Signing Bonus recipients—46% of the entire cohort (27 of 59) had left teaching by the beginning of Year 4. Our findings provide insight into this high attrition and suggest the importance of going beyond inducements to use a wider range of policy instruments to address problems of teacher supply and teacher quality.

Teacher Pay, Signing Bonuses, and Career Decisions

Policies aimed at attracting talented individuals to public school teaching face a number of challenges. Teaching has always had difficulty recruiting talent when, compared to other professions, the pay and status are low, and the working conditions unfavorable (Farkas, Johnson, Foleno, Duffett, & Foley, 2000; Olson, 2000).

Research on teacher pay has focused on the connection of pay to job performance, entry into the profession, and teacher turnover and attrition. One body of research has found, not surprisingly, that individuals' decisions to teach are sensitive to salary levels and, in particular, to starting teacher salaries (Baugh & Stone, 1982; Brewer, 1996; Ferris & Winkler, 1986; Hanushek & Pace, 1995; Murnane, Singer, Willett, Kemple, & Olsen, 1991). To some researchers, this suggests that front-loading the salary schedule (i.e., concentrating pay increases for teachers in the early years of teaching) may be a promising strategy to attract talented college graduates into teaching (Ferris & Winkler, 1986; Murnane et al., 1991). However, Ballou and Podgursky (1997, 1999) argue that higher salaries have had little impact on the overall quality of newly recruited teachers, as measured by easily observed personal char-

acteristics, such as undergraduate grade point average, SAT scores, academic major, and selectivity of college or university attended. They explain that certain features of the teacher-labor market—the single salary schedule, costly barriers to entry in the form of certification requirements, tenure, and ineffective hiring practices—appear to counteract the effects of increasing salaries.

Several recent studies have used quantitative methods to examine the relationship between pay and teacher turnover, migration, and attrition (Hanushek, Kain, & Rivkin, 2001; Ingersoll, 2001; Kirby, Naftel, & Berends, 1999; Lankford, Loeb, & Wyckoff, 2002). These studies have found that teachers' career decisions are also sensitive to working conditions. For instance, in analyzing longitudinal data from Texas, Hanushek, Kain, & Rivkin (2001) found that "teacher mobility is much more strongly related to characteristics of the students, particularly race and achievement, than to salary, although salary exerts a modest impact" (p. *i*). They speculate that students' race and achievement may be proxies for more difficult teaching assignments and working conditions. Lankford, Loeb, and Wyckoff (2002), who arrived at a similar finding in New York, found that "transfer and quit behavior of teachers is consistent with the hypothesis that more qualified teachers seize opportunities to leave difficult working conditions and move to more appealing environments" (p. 55).

Taken together, these studies suggest that a complex set of factors influence teachers' career decisions. While teachers, like all other economic actors, can be expected to respond to financial incentives, they also, as a group, highly value intrinsic rewards (Johnson, 1986, 1990; Lortie, 1975). Lortie defined intrinsic rewards as those that "consist entirely of subjective valuations made in the course of work engagement" (p. 101). As Johnson (1986) explained, intrinsic rewards are those that are "primarily internal and intangible, such as pride in work or achieving a sense of efficacy" (p. 57). Teachers' abilities to realize the intrinsic rewards of teaching are heavily influenced by working conditions such as class size, teaching assignment, course load, student characteristics, supplies and facilities, and the presence or absence of professional support from colleagues and administrators. In contrast, extrinsic rewards are those that are "primarily external and

material, such as pay and promotions" (Johnson, 1986, p. 57). While research has concluded that teachers value both extrinsic and intrinsic rewards, little is known about how they weigh each or how they factor the rewards into their career decisions.

Experts also know very little about how new teachers actually view and respond to signing bonuses, a special type of extrinsic incentive. We have found no studies of signing bonuses in the published literature on teacher pay and incentives. Nevertheless, their use has proliferated, for signing bonuses are easy for the public to understand and have a certain intuitive appeal. According to conventional wisdom and basic economic theory, highly skilled individuals avoid teaching because they have many higher-paying alternatives. Put another way, the opportunity cost of choosing to teach is very high for talented individuals. By raising take-home pay during the early years of teaching, the argument goes, signing bonuses can reduce the compensation gap between teaching and other lines of work and, thus, entice more talented individuals to enter the profession. For policymakers and district administrators, signing bonuses have the added advantage of being less costly than across-the-board pay raises; and they are less politically difficult to enact and more flexible to implement than altering the standard salary scale, which covers all teachers in a district. Furthermore, signing bonuses tend to attract a great deal of media attention and, thus, signal that districts and states value teachers and are taking action to address concerns about teacher quality and/or anticipated teacher shortages.

Policy Instruments

As we consider the role that the MSBP played in recipients' decisions to enter, stay, or leave public school teaching, we attend to the difficulty of using pay to influence complex behavior and decisions. The challenge of designing reward systems that effectively align incentives to desired behavior has been well documented (Kerr, 1975; Lawler, 1983, 1990). Moreover, as McDonnell and Elmore (1987) observe, incentives (or "inducements") have both strengths and weaknesses as a policy instrument, and their use reflects certain assumptions about problems and solutions.

McDonnell and Elmore (1987) define policy instruments as "the mechanisms that translate

substantive policy goals into concrete actions” or results (p. 134) and sort them into four classes:

- *mandates* are rules governing the action of individuals and agencies, and are intended to produce compliance;
- *inducements* transfer money to individuals or agencies in return for certain actions;
- *capacity-building* is the transfer of money for the purpose of investment in material, intellectual, or human resources; and
- *system-changing* transfers official authority among individuals and agencies in order to alter the system by which public goods and services are delivered. (p. 134)

As a policy instrument, inducements have a certain underlying logic and set of assumptions. Inducements rely on money rather than coercion to affect behavior. Unlike mandates, which seek to elicit compliance and uniformity of behavior, inducements attempt to elicit the production of value (in the form of a good, service, or set of specified behaviors). They also are unlike mandates in that they do not assume that all individuals and agencies should be expected to do the same set of actions. Rather, inducements assume that the targeted actors “vary in the capacity to produce things of value and the transfer of money is one way to elicit performance” (p. 142).

McDonnell and Elmore argue that in choosing to use inducements, policymakers implicitly make two assumptions: (a) that absence of money is the key factor that is preventing or limiting the production of the valued outcome, and (b) money is an effective way to elicit performance of the targeted individuals and agencies. They further note that “inducements are most likely to be effective when the capacities exist to produce the things that policymakers value and when preferences and priorities support the production of those things” (p. 142). In other words, incentives only work when individuals or organizations have the capacity to do whatever it is that policymakers want them to do. If actors do not have this capacity, then they cannot respond adequately to the incentive. Thus, as a policy instrument, inducements differ from capacity-building in that they assume that capacity already exists to produce the required outcome and that individuals just need to be motivated to put it to use. Induce-

ments and capacity-building are similar in that both use money as a tool; however, inducements aim at short-term returns while capacity-building aims at long-term returns. In other words, inducements are a form of procurement, whereas capacity-building is a form of investment (McDonnell & Elmore, 1987).

Compared to mandates, inducements have certain advantages. First, the costs of overseeing an incentive program are typically less than the costs involved in enforcing mandates. Second, inducements typically do not burden the targets of the policy with high compliance or avoidance costs. Citing McKean (1980), McDonnell and Elmore define compliance costs as “costs borne by individuals and agencies as a consequence of behaving consistently with mandates” and avoidance costs as “costs borne as a result of circumventing mandates, bargaining with enforcement agencies about the terms of compliance, or using political influence and litigation to change mandates” (p. 138). Third, while they may have some associated guidelines or regulations, inducements typically do not specify or constrain the means by which individuals or organizations produce the desired outcome. Inducements may thus allow or foster more innovation and creativity. However, this also means that “large variations in capacity or preferences and priorities will produce similar variations in the results produced by inducements” (McDonnell & Elmore, 1987, p. 143).

Compared to capacity-building, inducements have the advantage of focusing on short-term, and often more tangible, outcomes. As a result, they are sometimes easier to enact politically than policies that aim at producing outcomes that are more diffuse or take a long time to be realized (such as basic research or investment in professional development).

Policies that rely on inducements, however, face the challenge of getting the incentives right. Setting proper incentives is difficult and requires knowledge of the preferences, perspectives, and capacities of the target audience. McDonnell and Elmore caution that lack of information about the effects of inducements and assumptions about the existence of capacity can lead to ineffective or perverse incentives. Another issue in the implementation of inducements is deciding “how much variation to tolerate in the production of things of value, and how narrowly . . . to pre-

scribe how money is used and what is produced” (McDonnell & Elmore, 1987, p. 142). The more prescription that this involves, the more that inducements start to look like mandates.

On the surface, the Massachusetts Signing Bonus Program appeared to be a relatively simple incentive program. What was perceived as a large amount of money was offered to individuals in exchange for a fairly simple action—choosing to enter teaching. However, as McDonnell and Elmore’s analysis suggests, it is important to look beyond this seemingly straightforward inducement and ask several important questions. Did the individuals involved have the capacity to “produce the things that policymakers value?” Would the short-term effects of recruitment prove to have long-term value for the public? Did the MSBP identify the incentives that would matter to the candidates they sought to attract, and would those incentives work as the policy-makers intended? As the following analysis reveals, the story of the MSBP was not simple; nor was the outcome predicted. In fact, the experiences and perspectives of the bonus recipients in our study challenge some of the basic assumptions embedded in the design and implementation of the MSBP and the program’s reliance on inducements as the main policy instrument.

The Massachusetts Signing Bonus Program

History

In the summer of 1998, the Massachusetts state legislature created the MSBP amidst growing public concern about teacher quality. Earlier that year, the state had first administered the Massachusetts Test for Educator Licensure, and initial failure rates were very high; 59% of prospective teachers did not pass the basic skills portion of the test.¹ Faced with these dismal results as well as some criticism of the content and format of the exam, the state Board of Education initially voted to lower the passing grade. However, this decision met with controversy and the Board quickly reversed itself.

State politicians rushed to address the widely publicized “teacher-testing debacle” (Zernike, 1998a). Senate President Thomas F. Birmingham proposed using part of the state’s \$1 billion budget surplus to offer \$20,000 signing bonuses to attract talented individuals to teaching. As Birmingham explained, “This is an effort to level

the playing field a little bit so teaching will not be the profession of last resort. . . . We are trying to attract the best and the brightest to the teaching corps” (Ferdinand, 1998). “We want this to be elitist and unapologetically so,” Birmingham argued. “This is not just a check to people who would already go into teaching. The purpose of this initiative is to attract a population that has not traditionally gone into teaching. That’s one reason why we are aggressive in terms of the money” (Zernike, 1998b).

The legislature acted swiftly to approve the MSBP and establish a Teacher Quality Endowment Fund of \$60 million, the annual earnings of which would be used to fund the Signing Bonus Program as well as other initiatives aimed at strengthening the state’s future teaching force.²

Design

Although, from the beginning, it was described and marketed as a \$20,000 award, the Massachusetts Signing Bonus actually consisted of payments distributed over four years. The state recognized that, if the bonus were disbursed as a single payment, recipients could take the money and leave after teaching for only one year or less. Therefore, they decided to pay out the bonus in four installments, \$8,000 for the first year of teaching and \$4,000 for each of three subsequent years. Bonus recipients would be eligible for each year’s bonus payment as long as they were certified to teach in the state and employed as a teacher by one of the state’s public schools.

The legislation creating the MSBP authorized the State Board of Education to promulgate regulations for the program’s implementation, although state lawmakers established general guidelines. Regarding the annual selection of recipients, the legislation called on the Department of Education to “select the best and brightest teaching prospects based on objective measures such as test scores, grade point average or class rank, and such other criteria as the department may establish” (Massachusetts State Legislature, 1998). In carrying out this directive, the Department of Education set minimum criteria for applicants. In order to be eligible for the Signing Bonus, recent college graduates had to meet at least one of the following criteria:

- ranking in top ten percent of the candidate's graduating class,
- minimum 3.5 grade point average in the major, as designated by the college or university attended,
- minimum 3.5 grade point average overall,
- ranking in the top tenth percentile overall on a nationally recognized examination (e.g., GRE, GMAT, MCAT, LSAT, CBEST),
- nomination made by the dean of the candidate's institution of higher education. Each institution may submit up to two nominations a year.

These requirements were waived for candidates who had graduated from college five or more years before applying. In reviewing applications, the Department of Education assessed those candidates' professional experience and personal character. Interestingly, the legislation did not preclude individuals who were already licensed as teachers from receiving the Signing Bonus; it only barred individuals who had already taught in public schools.

The legislation further stipulated that, in any given year, the Department of Education should award bonuses only to "those deserving candidates," rather than to a fixed number of individuals. The Department, however, was permitted to "target awards to attract teachers for those subject matter areas most needed in the Commonwealth" (Massachusetts State Legislature, 1998). Although the Legislature discussed the possibility of targeting awards to candidates interested in teaching in low-income, high-need districts, that was not part of the final law.

While the legislation required that all recipients be certified to teach, it left open the question of how these individuals would become certified. This was a major concern, since the program was meant to attract individuals who had never taught in public schools and who had not originally intended to enter teaching. In addressing the issue of certification, the Department of Education created a program, subsequently called the Massachusetts Institute for New Teachers (MINT), to provide bonus recipients with an accelerated route to certification. MINT, a seven-week summer training program, consisted of accelerated coursework, and practice teaching in summer school. By participating in MINT and successfully completing a teaching portfolio during their first year of teaching, bonus recipi-

ents received a Provisional License with Advanced Standing, the same license that graduates of conventional, university-based teacher preparation programs received.³ All Signing Bonus recipients, regardless of whether they were already certified or not, were required to participate in MINT.

Design Assumptions

The design of the MSBP reflects a number of assumptions. For instance, the strategy assumes that the problem of teacher quality is one of insufficient financial incentives, that the key to improving teacher quality is getting smarter people to teach, and that the main reason smart people do not enter teaching is the low pay.

Embedded within this first assumption is another—namely, that good teaching is more about individual intelligence and subject matter expertise than about pedagogical skill. In essence, this is an assumption about individual capacity. By relying on inducements, the MSBP assumed that the prospective teachers already had the capacity to teach well, and that the state could acquire this capacity by providing intelligent individuals with a large enough monetary incentive to enter teaching. It is telling that, while the original legislation established detailed guidelines for selecting recipients and disbursing funds, it included no mention of training or on-the-job support. Moreover, the pre-service training that the Department of Education did provide was quite short and assumed that the bonus recipients, being intelligent and successful people, could quickly learn to teach.

Attracting talented individuals to teaching is certainly an important part of addressing the teacher quality problem. However, in focusing almost solely on who joins (or does not join) the teaching force, the MSBP largely ignored what happens to new teachers after they enter their classroom. The policy did nothing to address the organizational contexts in which new teachers find themselves—i.e., the school contexts that influence their work, their satisfaction, and, potentially, their subsequent career decisions. In the terms of McDonnell and Elmore's framework, the policy relied almost entirely on inducements and ignored the need to improve working conditions and build individual and school capacity. If they had thought differently about the issue of teacher quality, policymakers might have fo-

cused more on how schools are organized as workplaces, the nature of new teachers' job assignments, or the schools' capacity to support new teachers' development.

While the original MSBP legislation relied solely on inducements, the actual enactment of the legislation involved some elements of what McDonnell and Elmore called "system changing" mechanisms. By creating an alternative route to certification, the state Department of Education bypassed traditional teacher education programs. This system change created a powerful new incentive for prospective teachers—the quick route—and transferred authority and responsibility for training new teachers to the state-run summer institute and, implicitly, to the schools themselves. Thus, the creation of the alternative route, like the bonus, involved major assumptions about the capacity of prospective teachers to learn quickly and the capacity of their schools to support them on the job so that they could gain competence in the classroom. Insufficient capacity, both individual and institutional, proved to undermine the effectiveness of both the bonus and the alternative route as incentives to stay in teaching.

Data Sources and Methods

Sample

This study was designed as part of a larger longitudinal study of the experiences of fifty new teachers in Massachusetts, which, in addition to 13 Signing Bonus recipients, included 37 individuals who entered teaching through traditional routes (Johnson & Birkeland, 2003; Liu, Kardos, Kauffman, Peske, & Johnson, 2000; Peske, Liu, Johnson, Kauffman, & Kardos, 2001). The sample for this smaller study consisted of 13 members of the first cohort of Massachusetts Signing Bonus recipients. In the first year of the MSBP's implementation (1999), the Massachusetts Department of Education fielded approximately 6,000 inquiries regarding the MSBP and received 800 completed applications (Vigue, 1999). The state awarded bonuses to 59 individuals.

As a group, the 59 bonus recipients were quite diverse, and they ranged in age from 21 to 62 years old. Few had teaching experience (Tanklefsky, 1999), which was understandable since only individuals who had never previously taught public school were eligible to receive the Signing Bonus. Forty-one percent of the bonus recipients were en-

tering teaching at mid career, whereas 59% were entering teaching as their first career. In addition, the first cohort of bonus recipients included large proportions of male teachers and teachers of color: 46% were men and 23% were members of ethnic or racial minority groups (Pressley, 1999). Finally, while the group included individuals with a wide range of subject matter expertise, 40% were math and science teachers and were thus able to fill two important shortage areas.

We contacted 13 of the 59 Signing Bonus recipients directly, using a list from the Department of Education that included information on individuals' school placement, subject area, and prior work experience. All 13 teachers agreed to participate in the study. Table 1 presents summary information on each participant's demographic characteristics and career background.

We built the sample purposely to ensure that we would capture the range of experiences and characteristics of the Signing Bonus recipients. For instance, we were particularly interested in understanding the experiences of midcareer entrants and how the Massachusetts Signing Bonus might have influenced their decisions to switch careers and enter teaching. This population was also one that was targeted by the MSBP policy. We therefore sampled a disproportionately high number of midcareer entrants, choosing individuals who had switched to teaching from a wide range of fields, including fields with high status and pay (law, science, and technology) and those with status and pay closer to that of teaching (higher education, nonprofit work, and music). Overall, 8 out of 13 respondents were midcareer entrants to teaching. Bernie,⁴ Mike, and Robert were all former lawyers, though they were entering teaching at different points in their careers. Bernie and Mike were switching careers after fewer than 10 years practicing law, while Robert was switching after more than thirty years in the profession. Before entering teaching, Esther and Ranya worked in engineering and scientific research, respectively; Brenda worked for a nonprofit organization; Keisha worked in higher education administration; and Peter worked as a musician and part-time private school teacher.

While we were curious about the experiences of midcareer entrants, we were also interested in how recent college graduates viewed and responded to the Massachusetts Signing Bonus. Five of the participants in the study were entering

TABLE 1
Participant Information

Name	Gender	Race	Age	Entry Stage	Prior Career Field
Abe	M	White	23	First-career	
Bernie	M	White	32	Midcareer	Law
Brenda	F	White	31	Midcareer	Non-profit
Camilla	F	Hispanic	22	First-career	
Carolyn	F	White	22	First-career	
Esther	F	White	38	Midcareer	Science/Tech
Kareem	M	Asian	22	First-career	
Keisha	F	African-American	29	Midcareer	Higher Education
Laura	F	White	27	First-career	
Mike	M	White	27	Midcareer	Law
Peter	M	White	27	Midcareer	Music/Education
Ranya	F	Asian	39	Midcareer	Science/Tech
Robert	M	White	56	Midcareer	Law

teaching as their first career. Abe, Kareem, and Carolyn had just graduated from prestigious private universities, while Camilla had graduated from a large public university that was the flagship institution in her state. The fifth first-career entrant, Laura, graduated from a private liberal arts college and worked for a short time in outdoor education before deciding to pursue teaching as a career.

In selecting the sample, we did not have prior information on bonus recipients' race and ethnicity. The sample of 13 that we chose included four teachers of color. Keisha is African-American; Camilla is Hispanic; and Ranya and Kareem are Asian. Likewise, we did not have information about recipients' gender, although in most cases individuals' first names gave us a clue. The sample included seven women and six men, which reflected the gender proportions in the entire cohort of 1999 bonus recipients.

The study participants also took jobs in a variety of contexts. Most, however, taught in urban settings and in schools serving large percentages of low-income students. Six taught high school; three taught middle school; and four taught elementary school. Table 2 presents summary information about participants' initial school placements and teaching assignments.

Data Collection & Analysis

The first round of data collection, in 1999–2000, involved one tape-recorded, in-person interview (1.5 to 2.5 hours) with each respondent in the late fall or early winter. The interview included ques-

tions about the respondent's background, decision to enter teaching, views on career, experiences during the early months of their teaching, and attitudes toward various incentives and rewards. Participants were guaranteed confidentiality and given pseudonyms. During the summer of 2001, we conducted follow-up interviews with all of the original respondents. These interviews lasted 20–40 minutes and were completed by telephone or in person.⁵ Questions focused on individuals' career decisions, the factors that influenced these decisions (including both school conditions and the MSBP), and their future plans. We created different protocols for teachers who had stayed in their original schools, those who had switched schools, and those who had left teaching altogether. We also followed up on statements that individuals had made in their first interviews, seeking clarification or probing whether their attitudes or perceptions had changed in the intervening year. During the summer of 2002, we contacted the participants to learn about any career changes that they had made or planned to make.

In analyzing the data, we first composed narrative summaries for each respondent and each interview, which included information on prominent topics, identified emergent themes, and noted memorable responses. We then engaged in a rigorous analysis of the transcripts, coding and sub-coding according to themes that emerged from the narrative summaries, the transcripts themselves, and the literature. We relied on an iterative testing process, moving back and forth

TABLE 2
Initial School Placements and Teaching Assignments

Name	School Location	Students on Free or Reduced-Price Lunch at the School	Grade Level Taught	Subject
Abe	Suburb	7%	11, 12	Science
Bernie	Small city	25%	9	History
Brenda	Small city	52%	6, 7, 8	Spanish
Camilla	Small city	48%	8	English
Carolyn	Large city	70%	5	All
Esther	Large city	53%	10	Math
Kareem	Large city	49%	9, 10	History
Keisha	Large city	92%	2	All
Laura	Large city	76%	7	Science
Mike	Small city	83%	5	All
Peter	Suburb	2%	3	All
Ranya	Suburb	12%	9	Science
Robert	Suburb	3%	9, 11	History

from the themes we had identified to the details of the interview data and the narrative summaries. We also created matrices to summarize data and facilitate cross-case comparisons.

Our analysis is not an evaluation of the MSBP. Rather, it explores how this group of new teachers viewed the available intrinsic and extrinsic rewards of this program and factored them into their career decisions over the course of four years. It further examines the extent to which the policy addressed the identified problem.

Findings

In our analysis, we identify the various incentives (both intended and unintended) embedded in the MSBP and examine new teachers' responses to them. We first explore the incentives to enter teaching and then the incentives to stay. Finally, we consider the policy in light of McDonnell and Elmore's (1987) framework for understanding policy instruments.

The Incentives to Enter Teaching

The Primary Incentive of the MSBP

The new teachers in our study reported that the Signing Bonus had very little influence, if any, on their decisions to enter teaching. This is not to say that the MSBP, as a whole, did not influence some recipients' entry into teaching, but rather that the bonus money itself was a relatively weak extrinsic incentive. A much more powerful extrinsic incentive, according to virtually all of the partici-

pants in the study, was the program's accelerated route to certification.

In describing the role that the MSBP played in his decision to enter teaching, Bernie, a former corporate lawyer, explained:

Oh, it wasn't the money, you know (Laughs). I mean, the twenty thousand over four years, I'm taking that five times over in terms of a pay cut. . . . So it wasn't the money, it was the fast—it was the bypass of what I didn't think was necessary. . . . You could go through this quick program, and get a certification, and you'd be on your way.

After six years in law, Bernie had begun to question his initial career choice. To explore his options, he took some "interest inventory tests" and met with career counselors. He became "intrigued" with teaching and started to investigate it, talking to relatives who were teachers and "shadowing a couple of people." Bernie's informal research solidified his interest, though he did not anticipate being able to switch careers in the short-term: "I started to think well, maybe long range, maybe ten years from now. . . . I wasn't in the situation where I could take the time off to do a student teaching gig."

The MSBP spurred Bernie to act on his existing interest in teaching and accelerated his entry into the profession. What had prevented him from making the switch earlier was not so much the low pay as the high costs (in tuition and forgone income) of entering a full-time teacher education

program. Asked whether he would have accepted an offer of just the accelerated route to teaching without the Signing Bonus, Bernie replied: "I think I would have given it some serious consideration. The money part was useful initially, but [only] for the first year. . . . I gave up my livelihood from June to August [to attend the summer institute] and so I needed that gap filler."

Ranya, a former scientist, told a similar story. She had "always thought about teaching. . . . I thought it would be a profession that would be more rewarding in a personal sort of way, more kind of meaningful." With two small children, she also thought that teaching might be more family-friendly than her previous work. Ranya explained that she pursued the MSBP, "simply because of the fact [that] it's an easier process than certification. If I had to do it by myself, I would have to take so many classes and it's a thousand steps, before you get to the first level." She reported that, without the Program, she would not have entered teaching. However, when asked about the role that the various components played in her decision to teach, she elaborated:

The bonus itself, I think that was just like—even if it weren't for the bonus, if they said all the paperwork can be quite fast, I would have given it a try. It was definitely—I mean, it was good to have that in the first year, but I don't think that, in itself, would have chosen it one way or the other, for me.

For several years, Mike had been miserable as a lawyer. In his late twenties, he was considering switching to teaching, the only other career that he had explored while in college. As he explained, "Hearing about the bonus program galvanized my resolve. And I think that if I hadn't gotten the bonus, I would have then made a career—I would have tried to get into teaching some other way." During his first interview, Mike explained the relative importance of the Signing Bonus and the accelerated certification:

I don't think it's the money. I think it's the—and the money isn't really that much. I think it's the ease of getting in. It's avoiding the barrier to entry, that's the big deal.

One year later, in his second interview, he reiterated that view: "I mean, if there were no money at all, I would have done it."

To the midcareer entrants in our sample, the accelerated route to certification was much more

valuable than the \$20,000 total in bonus payments, and played a bigger role than the money in their decisions to enter teaching.⁶ Perhaps this should not be surprising, when one considers the costs of completing a conventional teacher education program. In addition to the out-of-pocket costs of tuition, they faced the opportunity costs of quitting their jobs and having no income for a year or more. Perhaps they could have completed their coursework while still working in their former jobs, but even then, they would have had to take time out for 2–3 months to complete their student teaching. By offering them an accelerated route to certification and to paid work in the classroom, the MSBP thus saved them time and a considerable amount of money—an amount that easily could have exceeded \$20,000.

The respondents' stories also suggest, however, that one of the reasons they valued the accelerated route to certification so highly was that they did not think traditional teacher education programs were worthwhile. Rather than viewing a full preparation program as a useful investment that would pay future dividends, they tended to see it as a burdensome cost and barrier. As Bernie said, it was something he "didn't think was necessary." In this way, these and other respondents bought into one of the assumptions embedded in the design of the Program: that any intelligent person with subject-matter knowledge can teach with little or no pedagogical training.

The first-career entrants in our sample, like their midcareer counterparts, also valued the accelerated route to certification, some because it gave them the opportunity to try teaching without first having to invest in a lengthy preparation program. This was the case with Camilla. As she approached college graduation, Camilla was uncertain about what career to pursue. She had considered teaching, social work, and non-profit work. To her, the MSBP "looked like a good opportunity to get into [teaching] and see if I did like it." What she found valuable was:

more the easy route, because the money—especially moving from [another state] where my rent was \$200 a month—here, that money is already gone just on rent. The cost of living. . . . Also, the summer program doesn't pay, so that's six weeks you're not getting any money. It really ends up not being that much money. I wouldn't call that a consideration.

The bonus money helped Camilla move to Massachusetts and cover her summer living expenses, but it was the “easy route” that was the major incentive to try teaching.

Other first-career entrants valued the accelerated certification not so much because they wanted to explore teaching as a potential long-term career, but rather because they envisioned making a short-term contribution to public education. For instance, new college graduates Abe and Kareem wanted to teach for a couple years before moving on to other lines of work—medicine for Abe, and international development for Kareem. Because they did not plan to stay long term, they were reluctant to spend additional time and money to become certified. Prior to being awarded the Signing Bonus, Abe and Kareem were investigating jobs in private schools. The MSBP greatly expanded their options by allowing them to apply to conventional public schools, which offered higher salaries and also student populations with which they were more interested in working.

The Bonus Money: A Weak or Irrelevant Incentive to Enter Teaching

For some respondents in our study, the bonus money played no role whatsoever in their decisions to enter teaching. Six out of the thirteen recipients had already committed to teaching and were actively pursuing entry before they received the bonus offer. For them, the money was irrelevant as an incentive to enter the profession.

Three of these respondents had already completed teacher education programs prior to being selected to receive the Signing Bonus. Keisha, a former administrator in higher education, was finishing a master’s degree in elementary education when she applied to the Bonus Program. Before receiving the bonus offer, she had already lined up a teaching position at an urban elementary school for the following year. She explained why she applied for the Signing Bonus: “My attitude was, ‘Well, why shouldn’t I get the money, too?’ That was literally my attitude. I went through an education program. I am planning to teach. Let me go for it.” Peter, a former musician and private school teacher who had also completed a teacher education program, echoed Keisha’s sentiments: “I was coming in anyway. I took advantage of the opportunity. I said, ‘I am going to teach anyway. Why not get

a bonus for it?’ And so I did.” For these two recipients, and for Robert (a former lawyer who had also completed a teacher preparation program), the Program offered free money, which they happily accepted, but which played no role in their decisions to enter teaching.

Three other teachers, for whom the bonus was a weak incentive to enter teaching, had not yet enrolled in teacher education programs when they received the Signing Bonus offer, but had already decided to switch to teaching from other careers. Laura, Brenda, and Esther were in the middle of working out the logistics of their career transitions when the MSBP came along and accelerated their timetables. Although, in valuing the accelerated route to teaching, they were similar to Ranya, Mike, and Bernie, Laura, Brenda, and Esther were farther down the path to teaching than these other midcareer entrants whose experiences were described above. They would have entered teaching without the MSBP, and they did not need the money or the accelerated route as an incentive to enter the profession.

Laura had worked at an outdoor education center and a university. Before receiving the bonus, she had applied to teach in private schools. She explained: “I always knew I was going to teach in the classroom; it just was a question of when. . . . My plan was to work at a private school, earn money so that I could go get a master’s and certified to teach in public schools after a couple of years. So this is just a more direct route.” In no way did the bonus money lure her into teaching. The daughter of teachers, she did not view teaching salaries as particularly low: “I think a teacher’s salary is okay. You know you are not going to make 60 [thousand] ever. But I grew up on a teacher’s salary, so I don’t feel like I need very much money.”

Esther, a former engineer who was taking time off to raise her young children, had become interested in teaching while volunteering at her children’s school. She did some substitute teaching and was planning to apply to a local teacher education program when she first heard about the MSBP. Before accepting the Signing Bonus, however, she did consider the financial advantages of completing a teacher education program instead: “The good thing about that is I would have ended up with a master’s, so I would have started considerably higher up on the [pay] scale. [The Signing Bonus Program] got me in quick,

but it also got me in low. I'm making less than I did when I started working in '83."

*Other Secondary Incentives:
Job Placement and Status*

Along with accelerated certification, the MSBP guaranteed individuals quick access to paid teaching positions. During the first year of the program, the Department of Education promised to find the Bonus recipients teaching positions.⁷ A few respondents found this promise particularly attractive. For example, Mike and Bernie, two of the former lawyers in the sample, were drawn to the package of quick training and placement assistance. As Mike said:

The money wasn't as important as the promise that "We'll sort of minimally equip you with the basics, pedagogy, and we'll find a job for you." So that it made this transition, career transition, which can be very traumatic, much easier. And I had been thinking of going into teaching anyway. So it just lubricated everything in a sense.

Bernie explained that in deciding whether to go through with the program: "The thing that attracted me most was their promise of placement, and the training." Similarly, Ranya, the former scientist, reported that she applied to the program, "because it said it's a quick certification process and then they help you with the placement and everything."

As it turned out, the bonus recipients received very little help with placement from the state. Most scrambled to find positions on their own and were hired in the late summer. This often meant that they ended up with particularly challenging teaching assignments.

For a few respondents, the MSBP offered a third, albeit less tangible, extrinsic incentive: status and recognition. Status came from the program's highly selective reputation and elite presentation, as well as the large sum (or perceived large sum) of money it offered. In program literature and press accounts, the MSBP was always described as a \$20,000 Signing Bonus, emphasizing the total amount rather than the parceled-out payments. One early newspaper article alluded to the high status that such a large sum implied, noting that this was "\$5,000 more than the median signing bonus received by Harvard Business School graduates" (Ferdinand, 1998).

For Robert, a former lawyer who was entering teaching in his mid-fifties, status and special recognition served as an inducement to teach in public rather than private schools. Having just completed a Masters of Arts in Teaching degree, he had an early interest in private school teaching, but changed his plans in response to the MSBP:

The Signing Bonus Program was really one thing that sort of helped tip me towards public schools. And I think basically because of the Signing Bonus Program, this spring I didn't even apply to any independent schools. I said, "Gee, I've done my student teaching at a public school." And I said, "Hey, given the recognition, and you know, that's really a significant factor in my decision."

Peter also valued the special recognition that came with being selected to receive the Signing Bonus. To him, the Program provided "a chance to get an award, to be honored just in terms of the prestige of getting an award, but also just the fact of getting an award of money. But I didn't go into teaching for money." For Abe, the MSBP also seemed to provide the reassurance that, if he received the bonus, he could become a good teacher:

The money itself was kind of minor. I mean, I definitely could have lived on the salary that I was getting without the Signing Bonus. But it made me feel more comfortable, and I think more than anything else it was symbolic of people putting their faith in me, and saying, "You can do this. You can teach." And I think that was all I needed.

Summary

What is striking in the previous accounts is the reported lack of importance the Signing Bonus money had in the respondents' decisions to enter teaching. Prior to receiving the bonus offer, all but one were seriously considering teaching, and ten out of the thirteen had already taken steps (both large and small) toward the profession. These were not the individuals the legislators originally envisioned, those who, without the Signing Bonus, "would otherwise not consider a career in teaching." All of the respondents told us that they would still have participated in the program, or would have seriously considered participating, if they had been

offered only the accelerated route. Much more than the extra money, the new teachers valued the promise of quick training, rapid certification, job placement, and the status that came with being a recipient. These were the program's most powerful extrinsic incentives.

This is not to say that financial considerations played no role in respondents' decisions to enter teaching. Money did matter, but in an indirect way. Respondents' concerns about entering teaching centered not so much on low salaries as on the high costs of entry (costs in time, tuition, and foregone earnings). It was these costs that they perceived to be the larger barrier to entering teaching. The program reduced these costs by providing an accelerated route to certification.

Some recipients did rely on the first bonus payment because it helped make their entry or transition to teaching smoother than it otherwise might have been. They used the bonus money to pay for their moving expenses, purchase school supplies, and cover living expenses while enrolled in the full-time summer training institute.

The Incentives to Stay in Teaching

The Massachusetts policymakers distributed the bonus payments over four years to ensure that recipients would stay in teaching. The designers' strategy for retaining teachers thus relied solely on extrinsic, financial incentives.

However, in studying bonus recipients' career decisions over time, we found that the annual payments played virtually no role in their decisions about whether (or for how long) to remain in teaching. Instead, those choices were influenced primarily by the intrinsic rewards of teaching and the respondents' success in realizing them. Whether they were successful or not largely depended on the working conditions that the new teachers encountered in their schools.

It is noteworthy that eight of the thirteen bonus recipients whom we followed left public school teaching before receiving the full bonus. Of these, three left after the first year of teaching; one left midway through the second year; and four left after the second year. They reported that they left largely because they felt unsupported at their schools and were not finding success as teachers. Their stories suggest that feeling successful—being able to realize the intrinsic rewards of teaching—depended largely on a set of conditions at their school sites: whether they had

assignments and teaching loads that were appropriate and manageable; whether they received adequate support and guidance from their principal and colleagues; and whether they had the curriculum and resources they needed to do their work.⁸ The cases of Brenda and Camilla illustrate this point.

Brenda, age 31, entered teaching from the nonprofit sector. Prior to receiving the Signing Bonus, she had completed a general master's degree in education, though not one that led to teacher certification. She figured that, as a native Spanish speaker, she could find a teaching job somewhere:

I was certainly thinking I was going to teach, though, after [completing] school. I was thinking somehow it would, something would work out. And I knew that people are kind of, especially for language teachers, there's really a shortage. And I know that sometimes public schools even hire people that aren't certified and then work with them. So, I thought somehow I would, I would end up teaching.

During her first year, Brenda taught at an urban middle school that was very diverse, racially, ethnically, and socioeconomically. As the only Spanish teacher at the school, she had an unusually challenging assignment—210 students in three grades and 10 classes. She explained:

I have 10 different groups of kids that come in. Seventh and eighth graders come in three times a week. Sixth graders come in twice a week. And there's three different sixth grades, three seventh, and four eighth grades. And then within each grade, there's different tracks.

The lack of continuity and the sheer number of classes made it difficult for Brenda to establish relationships with students, and she struggled with classroom management.

As a new teacher, she was shocked by the lack of resources at her school, which suffered even in comparison to the nonprofit research organization where she had previously worked:

I come from a non-profit . . . you know, not making a lot of money. But if I needed to photocopy something, there was a photocopier there. There were computers. There were phones, you know. And to think that we expect to educate kids. . . . We have one copier at the school. And of course, no phones in the rooms—you know, that goes without saying. But I mean, so

that, together with just feeling kind of beaten down and so exhausted at the end of the day, every day.

Brenda also lacked a comprehensive curriculum. She described the Spanish curriculum she was given as:

... a mish mash of photocopies of different worksheets from different books. Like half the page might be missing. The copy [quality] is bad. And then for the games, it doesn't really explain—or the activities, there's no—there's like an expectation that you would know what to do with like a page that has like a grid on it. . . . It doesn't have a breakdown of like lessons or anything, by no means.

Her colleagues at the school, mostly veteran teachers who might have been a resource for her, were not much help. Usually they were gone for the day by 2:30 pm, and “they’ve set up things in such a way that maybe like after years and years of doing it, they don’t have to plan as much or they have their systems down.” When we first interviewed Brenda in January 2000, she was desperate for someone to come into her classroom and observe her teaching:

I just really wanted feedback on what I’m doing. . . . You know, “You could be doing this a little bit different. I think that wouldn’t have happened if you had done this.” I kept saying, you know, “I want anybody that wants to come in and observe.” I mean, I don’t care. I don’t care what they think; I just want some feedback. I don’t care if it’s a horrible lesson and they see me. I just need to know.

At the end of her first year of teaching, Brenda had serious doubts about staying at her school or even staying in teaching. During the summer, she weighed her options and decided to return, partly because she was to have a slightly reduced load and teach the sixth graders only once a week. However, a group of teachers went to the principal and expressed concern that their sixth graders would fall behind those in other district schools. The administrators decided to revert to the old schedule, and thus Brenda had the same overwhelming workload and schedule for a second year. Feeling totally unsupported by her principal, she resigned in mid-November.

In January 2001, Brenda took a long-term substitute position (80% time), split between two schools in another district. Even though it paid

poorly, had no benefits, and involved travel, it was in a district known for supporting teachers. She taught many fewer students (65–70) and met with them every day. The continuity made a big difference. There were also curriculum materials and a useful textbook, with supplementary materials and ideas for activities.

When we interviewed Brenda at the end of her second year of teaching, she was again struggling with the decision of whether or not to stay in teaching. She had been offered a full-time regular teaching position by the district, but turned it down, because it would have required her to teach first, second, seventh, and eighth grade students. She subsequently explained her decision to return to work in the nonprofit sector:

[I] was sort of wanting something where I felt [it was] more rewarding. . . . I know a lot of teachers think it’s the most rewarding thing they could ever do, and I definitely admire the profession, the people that have done it for a long time. But I’m also quite disillusioned with the way things are set up. And, I think as a profession, it’s not very respected, not very respected by even the administration in the schools, and by other people.

For Brenda, the lack of resources and the poor organization of schools were the most visible signs that society did not respect teachers. These conditions had made it impossible for her to attain the intrinsic rewards and satisfactions for which she entered teaching. Instead, she found teaching isolating and missed interacting with other adults. She said that she did not think about the \$8,000 in forfeited bonus money when she decided to leave.

Camilla’s reasons for leaving teaching, like Brenda’s, centered on working conditions. Initially, she had wanted to explore teaching and decide if it was a good match for her. In her first year, she was assigned to teach eighth grade English in the library at an urban middle school. Teachers and students constantly walked through her teaching space: “It’s just insane. It’s sort of like teaching literally in the middle of the hallway. There are constantly classes walking by, copy machines running, phones ringing.” Camilla’s curriculum, a list of books that she was supposed to cover in sequence, did not provide much guidance to her as a novice teacher: “They tell you what you should be teaching, but not how to teach it, and not necessarily [the] material. If they tell us

we have to be reading this novel, you have the novel, and that's it."

Camilla taught in a middle school cluster in which a core of teachers all shared the same students and met daily to plan together. But her schedule prohibited her from attending those meetings, so she never felt well connected to colleagues in her cluster. Despite these challenging teaching conditions, she was satisfied enough to return to the school to teach a second year. In December, however, she resigned, largely because the school had changed her position so that she had to teach both history and English. She explained:

I'm completely unqualified to teach history, so it was a little bit difficult. And then on top of that, the way they set it up was that one of the classes was a very high honors group; the other class was a very low, at-risk group. So, essentially every day I was making four lesson plans.

The school also had a new principal, and Camilla was frustrated with the lack of consistent discipline. Overall, it was the inappropriate teaching assignment and the lack of support that led her to quit:

I think if it had been a more exciting atmosphere, more supportive, I might have stayed longer. . . . I feel like, I mean, it definitely wasn't ideal. It was like a rat race, you know? I felt like I was always really, really exhausted, and any ideas, or lessons, or things like that that I might have been able to get excited about, and have done a really good job teaching, I wasn't able to do. So, I mean, I think that really drags down teachers when they can't really perform the way they would like to.

Asked whether she had considered the Signing Bonus in making her decision, Camilla answered:

No, not at all, because I knew I would be getting, I think \$4,000 extra dollars the next year. And like I said, if it's taxed at 30 percent, it's really only something like, you know, less than \$3,000, which, to me, isn't enough money to decide whether I'm going to be happy somewhere.

Camilla and Brenda's stories were, unfortunately, typical. Robert and Ranya also left public school teaching because of poor working conditions. Robert quit because of the overcrowded classes and facilities, inadequate support, difficult schedule, poor management, and low teacher

morale at his school. Ranya described having no textbooks during her first two months of teaching, no lab materials, and no support from her colleagues. She said of her first year: "I was really frustrated because, like I said, there was no help from anyone—not from the department, not from the school itself, and not from the mentor that they had assigned me. . . . And it's not that I didn't ask for help."

There were several new teachers in our sample whose decisions to leave teaching were influenced mostly by factors unrelated to either money or working conditions. Peter and Esther left largely because of developments in their spouses' careers. Abe and Kareem, who initially intended to spend only a few years teaching, left as they had planned. The Signing Bonus did not tempt them to stay. Only Laura said that the Signing Bonus was a factor in her decision to continue teaching in Massachusetts rather than another state. However, she was motivated not by the money, but by the promise she believed she had made to the state in accepting the award.

By contrast, some respondents said they taught in schools that supported them as new teachers and, thus, they were able to realize the hoped-for intrinsic rewards. They were still in teaching by year four. Carolyn, for example, had entered teaching expecting to be in the classroom only a short time, but found her colleagues supportive and elected to stay through her fourth year. Similarly, Bernie was satisfied with his urban high school history position, particularly during his second and third years as he became more experienced. He, too, remained through year four, despite some lingering concerns that his growing family would have trouble living on a teacher's salary. Laura also found supportive working conditions at her original school and would have stayed, had she not been bumped by a teacher with more seniority. She was transferred to another school where she was reasonably satisfied. Two recipients, Mike and Keisha, encountered early dissatisfaction with their original schools, and so they transferred to schools where they found more support and success. They, too, completed their terms as Signing Bonus recipients.

Conclusions and Implications

Despite being touted as a large sum of money by policymakers and the public, the Signing Bonus payments proved to be a very weak incentive.

Respondents viewed the \$4,000 annual payments as a small amount of money and they barely, if at all, factored the value of the bonus into their decisions to enter or remain in teaching. In choosing to teach, the individuals in our study weighed both the intrinsic and extrinsic rewards of teaching. However, even this substantial bonus could not compensate for their disappointment and frustration when they could not achieve satisfaction and success in the classroom.

This research is important, not only because it informs current efforts to attract and retain teachers, but also because it extends our understanding of inducements as a policy instrument. The MSBP was intended to address the issue of teacher quality by relying on a substantial financial inducement to attract talented individuals who otherwise would not consider teaching. McDonnell and Elmore discuss the sorts of problems for which inducements are effective:

Problems that prompt inducements are ones in which the absence of money directed at the appropriate purposes is the key determinant of the problem. Inducements assume that the capacity exists to produce whatever is required or can be readily acquired if the right monetary incentives are provided. Inducement problems are, at some fundamental level, production or procurement problems. (p. 142)

Indeed, those who designed the MSBP defined the challenge of staffing schools with high-quality teachers as a problem of procurement, one that could be solved with the inducement of \$20,000. They assumed that individuals who are intelligent and have strong subject-matter knowledge already have the capacity to teach well, but they ignored the roles that school context, working conditions, and pedagogical knowledge play in making quality teaching possible and helping new teachers find success (and intrinsic rewards) in the classroom.

McDonnell and Elmore also caution that inducements can lead to unintended responses. Citing Bardach, they observe: “the lack of adequate information about the effects of inducements often results in inefficient reward schedules that generate incentives which turn out ‘to be too weak or too strong or just plain perverse’ ” (p. 148). In fact, the financial inducement in the MSBP worked in unanticipated ways and the selection process was not as exacting as it was expected to

be. Most respondents were already intending to teach; several who were already certified applied for the bonus anyway and received it; and the staged payout plan failed to retain 8 of 13 teachers in a Massachusetts public school classroom for four years. Unexpectedly, a far more powerful inducement emerged: the fast-track certification program created by state education officials to implement the policy. The chance to avoid the opportunity costs of traditional teacher education proved to be more attractive to participants than the Signing Bonus.

It could be argued that the shortcoming of this policy was in its implementation, that a more discriminating screening and selection process might have successfully identified the “right” recipients—those who had strong subject-matter knowledge and a latent interest in teaching, but who would never enter teaching, but for the bonus. This assumes that such candidates existed in the pool but were not chosen, and we have no evidence that this was so. In addition, research suggests that even rigorous admissions criteria and careful selection are not enough to ensure quality teaching. In a recent review of the literature, Goldhaber (2002) concluded that most observable teacher characteristics—e.g., experience, education level, test scores—are poor predictors of good teaching and student achievement. This suggests the limitations of policies that rely too heavily on selection.

More notable than the uneven and unforeseen effects of these inducements was the fact that their strength was severely compromised by two related problems of capacity—the individuals’ limited preparation and teaching experience coupled with the schools’ lack of capacity to support them in their work. As noted earlier, the decision by the Department of Education to create an alternative certification program in order to implement the Signing Bonus legislation was a “system-changing” initiative, which shifted the exclusive authority to prepare licensed teachers away from university teacher education programs and moved it to a summer program run by the state, utilizing contracted instructors. That MINT was a fast-track, 7-week program made it attractive to the candidates. However, because of its brevity, particularly its very limited student teaching experience, the Signing Bonus recipients started their jobs with substantial need for continued, job-embedded training and support, which few schools had the

capacity to provide. None offered a sustained induction program, and although the state required districts to assign mentors to all new teachers, whatever their preparation, such arrangements proved to be of little help (Kardos, Johnson, Peske, Kauffman, & Liu, 2001).

As it turned out, the Bonus recipients entered schools that were not organized to support their ongoing learning and address their particular needs as novices. Their schools had structures and norms that supported private, independent practice rather than collaboration, and none had a well-developed infrastructure that ensured frequent, sustained, and meaningful interaction between both novice and veteran teachers (Johnson & The Project on the Next Generation of Teachers, 2004). Few of the Signing Bonus recipients described schools that had arranged schedules or reallocated resources to create common planning time, fund substitutes and release time for classroom observations, or provide novice teachers with frequent feedback on their teaching.⁹ Instead, teachers repeatedly told of the ways in which their schools failed them—unreasonable or inappropriate teaching assignments, arbitrary administrative practices, lack of curricula, absent or poorly-matched mentors. In the face of such limited capacity to support good teaching, financial inducements mattered little to these candidates.

In approving the MSBP, legislators were impatient to address the problem of teacher quality. They acted as if strong candidates could succeed solely on the basis of innate talent and schools already had sufficient capacity to support new teachers. In fact, both assumptions were wrong. The legislation included no requirements or funding for on-the-job support or job-embedded training. The DOE sponsored several seminars for Signing Bonus recipients through the fall of their first year, but because these were unconnected to their teaching assignments, they offered little more than moral support. McDonnell and Elmore note that inducements are attractive because they promise “proximate and tangible effects” while capacity-building has “distant and ambiguous effects” (p. 139). It is far easier to win political support for an inducement policy such as the MSBP that promises quick results than for one designed to strengthen all the schools where recipients might teach. However, the experiences of recipients in this study confirm McDonnell and Elmore’s speculation that “capacity-building

may be instrumental to mandates and inducements” (p. 139).

There is virtually no evidence in our study that the \$20,000 signing bonus was an effective inducement for achieving the policy’s goals. Research by Hanushek (2001) and others suggests that a much larger bonus (20%–50% of regular wages) might have augmented its power to attract and retain candidates. However, the cost of this strategy (\$7,000 to \$17,500 per year for teachers earning \$35,000) and the discontent it would likely provoke among other teachers would seem to make this an untenable option. Moreover, this approach would do nothing to address the schools’ failure to support new teachers, which our respondents repeatedly reported was at the center of their dissatisfactions with teaching. The failure of the MSBP to attract the candidates it originally targeted—individuals who might never consider teaching without a substantial financial inducement—and its inability to retain the recipients it did attract suggest that this approach to improving teacher quality is insufficient and ill-conceived.

How, then, might the policy instruments of inducements and capacity-building be combined to more effectively achieve the goal of improving the recruitment and retention of high-quality teachers? One option would be to commit a large share of the bonus money to improve the summer training component and to support induction and professional development of the Signing Bonus recipients as they begin to teach. In this case, the policy would focus on developing the capacity of individuals rather than institutions. This approach might compensate for the abbreviated pre-service preparation and help to address the new teacher’s personal need for instructional supervision, although it would not assure that other institutional supports essential to ensure success in the classroom would be in place. Another possibility would be to identify a small number of high-need schools where Signing Bonus teachers would be assigned and to invest heavily in developing capacity within those schools. This has the advantage of providing a comprehensive approach in schools that most need assistance, although it runs the risk of concentrating inexperienced teachers in a few schools.¹⁰ A third strategy would be to fully fund induction and support programs for all new teachers. While expensive, this approach has had encouraging success in California

(Bullard, 1998) and Connecticut (Archer, 2000). With such an approach, which would emphasize building capacity in all schools, Signing Bonus recipients could be assured that, wherever in the state they took jobs, they would find support.

Our findings suggest that, as a strategy for improving teacher quality, the MSBP: (a) relied too much on inducements and not enough on capacity-building, (b) focused too narrowly on recruitment and not enough on retention, and (c) centered too much on individuals and not enough on schools. Thus, the second or third options discussed above would be more likely than the first to effectively address the problem of teacher quality. Increasingly, research suggests that the challenge of attracting and retaining new teachers depends on making sure that schools are places where teachers can achieve the intrinsic rewards that a career in teaching offers. Short of that, no financial inducements will suffice.

Notes

¹The teacher test was created as part of the sweeping Massachusetts Education Reform Act of 1993, which, among other things, dramatically increased overall education funding; instituted standards, curriculum frameworks, and high-stakes testing; and authorized the creation of charter schools.

²The other initiatives included funding to create a corps of master teachers, support for teachers to pursue certification by the National Board of Professional Teaching Standards, and college scholarships for high schools students who were interested in pursuing careers in teaching (the "Tomorrow's Teachers Program").

³Teacher licensure in Massachusetts has undergone numerous changes during the period of this study. The names and components of the licenses have changed slightly.

⁴We use pseudonyms to identify study participants throughout this article.

⁵One respondent who had left the United States replied by e-mail.

⁶This was true for six of the eight midcareer entrants. The two for whom this was not the case were already certified and thus the accelerated route had no incentive value for them.

⁷As of the second year of the program, the Department of Education no longer promised to find bonus recipients teaching positions.

⁸These factors were identified with our project colleagues in an earlier analysis of the data from the larger study of 50 new teachers, which included this sub-sample of 13. See Johnson & Birkeland (2003)

and Johnson & The Project on the Next Generation of Teachers (2004).

⁹Much research has documented both the potential as well as the challenges of restructuring schools into learning organizations. See, for instance, Bryk, Camburn, & Louis (1999); Elmore, Peterson, & McCarthey (1996); Fullan (1991); Little (1982; 1990); McLaughlin (1993); Miles & Darling-Hammond (1998); Newmann & Associates (1996); Rosenholtz (1985).

¹⁰In 2003, the DOE moved in this direction, by establishing partnerships with high-need urban school districts and helping them develop the capacity to provide more intensive on-the-job support for MINT graduates. At the same time, budget cuts led officials to eliminate the signing bonuses, while retaining the accelerated route to certification.

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