

## A Statistical Portrait of Uncertified Teachers in New York City Schools

### SUMMARY

Faced with a persistent shortage of certified teachers, the city's Board of Education has relied heavily on uncertified teachers to staff its classrooms. Since 1990, between half and three-quarters of the teachers hired each year have been uncertified. Fifteen percent of the city's public school teachers were uncertified in 2000.

In an effort to raise teacher quality, the state's Board of Regents has curtailed the hiring of uncertified teachers in low-performing schools and prohibited their hiring in all public schools as of September 2003. Given the shortage of certified teachers and the large number of teachers expected to retire over the next few years, the Board of Education faces significant barriers to meeting the Regents' mandate. These facts make it of continuing importance to better understand who these uncertified teachers are, how they differ from their colleagues, and how many of them eventually become certified.

Based on the experience of teachers who joined the school system from 1990 through 1994—the cohorts of teachers who have had sufficient time to make it through the certification process—the Independent Budget Office finds that more than half of the teachers who joined the system without certification have become certified. Among the other key findings in the report:

- Blacks, Hispanics, and males comprise a larger share of the recently hired uncertified teaching population than among certified newcomers to the public school system.
- The heaviest concentration of uncertified teachers is in the Bronx, where 22 percent lacked state certification in the 1999-2000 school year.
- The number of uncertified teachers in the city's lowest-performing schools has declined significantly in response to state policy.
- Uncertified teachers were disproportionately concentrated in science classes, elementary school bilingual Spanish classes, and special education day school classes during the 1999-2000 school year.
- Although uncertified teachers overall tend to gain graduate education credits at a slower rate than certified teachers, uncertified teachers who become certified earn credits at a faster pace than their counterparts who join the city schools with certification.
- The rate of attrition among uncertified new teachers is significantly higher than the rate among certified new teachers.

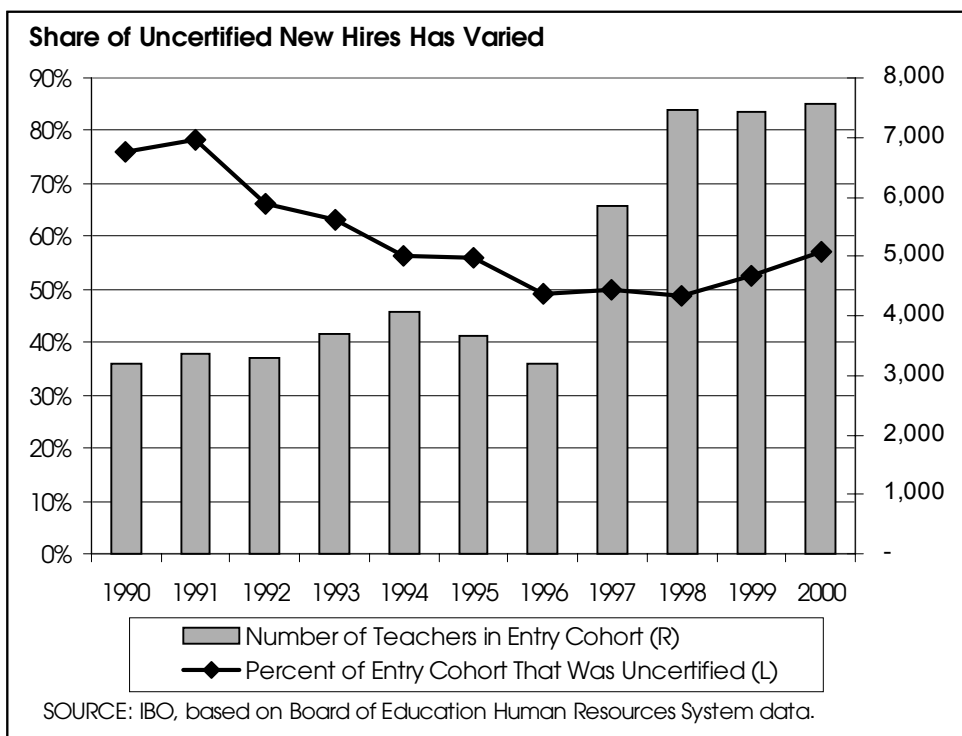
IBO's report is based on data on individual teachers provided by the Board of Education.

## INTRODUCTION

Faced with a persistent shortage of certified teachers, the New York City Board of Education (BOE) has relied heavily on uncertified teachers to help staff its schools. In 1990, over three-quarters of the nearly 3,200 new teachers hired by the board were uncertified.<sup>1</sup> More recently, although the number of teachers hired each year has increased, the share of teachers hired without certification has generally declined. Despite this decline in share, the overall number of uncertified teachers being hired is rising. By 2000, uncertified teachers made up 57 percent of the over 7,500 teachers hired. Uncertified teachers accounted for 15 percent of the more than 76,000 public school teachers in 2000.

fill vacancies in SURR schools under certain narrowly-defined circumstances. Under the settlement, while vacancies were pending in SURR schools, non-SURR schools were prohibited from hiring certified teachers qualified to fill those vacancies. The Regents based their hiring prohibition on the strong correlation between low test scores and the use of uncertified teachers. Yet the specific relationship between uncertified teachers and student performance is unclear. Does the use of uncertified teachers diminish student performance? Or do concentrations of poorly performing students make it more difficult to attract certified teachers?

Understanding the characteristics and typical career paths of teachers who come into the system without certification is of continuing importance. The shortage of new certified teachers along with the large number of city teachers expected to retire over the next few years compounds the difficulty of meeting the Regents' mandate. The Board of Education may have little choice but to continue to hire some uncertified teachers. Moreover, even if the board succeeds in meeting the Regents' mandate, it will still be allowed to hire uncertified teachers for the next two school years. This brief, relying on Board of Education data about individual teachers, lays the foundation for this understanding as well as for further research into the relationship between uncertified teachers and student performance in city schools by first describing the uncertified teaching population.



In July 1998, as part of a broader effort to raise the quality of teachers statewide, the New York State Board of Regents prohibited the hiring of uncertified teachers for all districts beginning in September 2003. Under the Regents' initial guidelines, beginning in September 1999 the board was to have stopped hiring uncertified teachers for its Schools Under Registration Review (SURR), low-performing schools at risk of being closed by the State Education Department.

Recent experience suggests that meeting the Regents' mandate will present a serious challenge. The board missed the initial deadline, prompting the state to file suit to force compliance. In August 2000, BOE and the Regents negotiated a settlement under which the board could only hire uncertified teachers to

IBO's analysis indicates that it is inappropriate to use a broad brush in describing the city's uncertified teachers. Instead, they can be categorized in at least two distinct groups, one of which looks quite similar to the public schools' population of recently hired certified teachers. Indeed, more than half the uncertified teachers hired by the board go on to become certified. Understanding the differences among uncertified teachers may help policymakers develop more narrowly focused strategies to address the city's reliance on uncertified teachers.

The brief begins by defining what it means to be an uncertified teacher and then focuses on the characteristics of the current population of active uncertified teachers, taking special note of how these characteristics differ from those of the active certified

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teaching population.<sup>2</sup> Next, the distribution of uncertified teachers throughout the city and in the city's worst performing schools is reviewed. The report examines the general career paths of uncertified teachers, noting the characteristics of those who go on to become certified as well as those who leave the board. Finally, it examines the attrition rate among new uncertified teachers and notes how this affects attrition measures among new BOE teachers in general.

## WHAT UNCERTIFIED MEANS

An uncertified public school teacher is a teacher who lacks valid state certification but has been granted a Preparatory Provisional Teacher Certificate (PPT) by the board. The State Education Department gives holders of PPTs temporary licenses in order to teach while working towards certification. To be granted the temporary license, the teacher must have attained at least a bachelor's degree with 36 subject area credits.<sup>3</sup> In addition, the teacher must have outlined a plan for completing the necessary coursework and passing the state exam needed to attain certification. After one year, the state can renew the temporary license as long as the teacher is performing satisfactorily and making progress toward becoming state certified. A state temporary license can be renewed up to three times (up to five times for bilingual teachers).

A certified public school teacher is a teacher who has obtained valid state certification in one of two possible ways. If a teacher has met the minimum coursework and state certification exam requirements and has been appointed to a full-time teaching position with the board, he or she obtains provisional certification.<sup>4</sup> Within five years a teacher with provisional certification must attain a master's degree, complete two years of full-time satisfactory service, pass a content specialty exam and have a performance video taken. Once the teacher has met all these requirements, he or she then holds permanent certification.<sup>5</sup>

The majority of certified teachers begin with provisional state certification and have five years to complete their course requirements. Uncertified teachers also have up to five years before they must ultimately have completed their coursework, passed the state exam and obtained state certification.<sup>6</sup>

## WHO THEY ARE

Thousands of uncertified teachers are hired each year in New York City. Of the 7,556 new classroom teachers hired for the 2000 school year, 4,305—or 57 percent—were uncertified. Fifteen percent of the entire public school teaching population

in that same year was uncertified. Using data compiled from the board, IBO has identified certain common characteristics of uncertified teachers hired over the past decade and determined how they differ from the certified teachers hired during the same period and from the rest of the public school teaching staff.

*Race, ethnicity, gender, and age.* Blacks and Hispanics account for a larger share of the recently hired uncertified teaching population than of the population of new certified teachers. These groups made up 58 percent of the uncertified teachers hired for 2000, compared with 30 percent of the certified hires. Of those hired for 1999 who were still employed by the board in September 2000, 61 percent of uncertified hires were black or Hispanic, compared with 26 percent of the new certified teachers that year.

Among recent hires, males make up nearly twice as much of the uncertified teacher population than they do of the certified cohort. Twenty-eight percent of the uncertified teachers hired in 2000 were men, compared with only 16 percent of those who started out certified. A similar pattern was found among the 1999 hires still employed in September 2000.

Although uncertified teachers are considerably younger than the average for all certified teachers, newly hired uncertified teachers tend to be slightly older than new teachers who are hired with certification. Given the limited number of years an uncertified teacher can remain in the system, it is not surprising that the uncertified teaching population is much younger than its certified counterpart. Since 1995, the mean age of uncertified teachers has hovered around 37. Over the same period, the mean age of certified teachers has been 45.<sup>7</sup> Among teachers new to the system, however, uncertified teachers have tended to be roughly two years older than their entering colleagues who were certified. Ultimately, uncertified teachers come into the system relatively older and remain in the system for a relatively shorter period.

*Educational attainment.* Uncertified teachers not only have less post-secondary education than certified teachers, on average, but also come into the system with fewer credits and acquire additional credits more slowly than new teachers who enter the system with certification.

Uncertified teachers generally have less post-secondary education than their certified counterparts. In the 2000 school year, 86 percent of active certified teachers had earned credits beyond a bachelor's degree, while just 27 percent of active uncertified teachers could make the same claim. Similarly, just over 22 percent of uncertified teachers had attained a master's

degree (or the credit equivalent) compared with 82 percent of certified teachers.

It is not surprising that certified teachers, who spend more years on average working for the school system, acquire more education. However, the gap in educational attainment is also driven by two other contributing factors. First, certified teachers are more likely than uncertified teachers to join the board with education beyond a bachelor's degree. Second, even those certified teachers who do not start with an educational advantage tend to acquire additional education credits at a relatively quicker pace than do their uncertified colleagues with similar initial educational preparation.

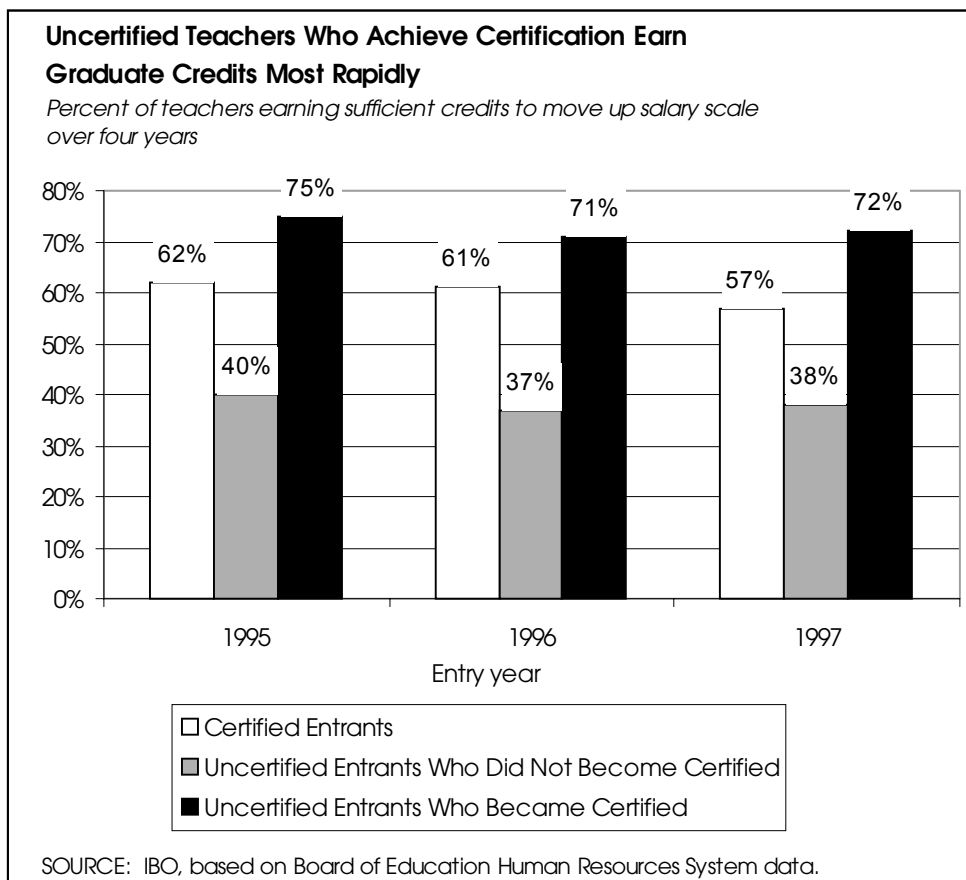
IBO's analysis of teachers joining the school system each year from 1995 to 2000 indicates that while most teachers enter with a bachelor's degree—the minimum level of educational attainment—certified teachers are more than twice as likely as their uncertified counterparts to start with more than a bachelor's. Each year, an average of 42 percent of starting certified teachers had attained credits beyond their bachelor's degree, compared with just 19 percent of starting uncertified teachers.

For the majority of entering certified and uncertified teachers who enter with a bachelor's degree, IBO's analysis shows that certified teachers acquire additional education at a quicker pace than those teachers who come in (and remain) uncertified. Certified teachers entering the schools in 1995, 1996 and 1997 were roughly 25 percent as likely to have moved beyond the bachelor's degree within four years than were their uncertified counterparts.

While this suggests that uncertified teachers are less responsive to the requirement faced both by uncertified and by provisionally certified teachers to earn additional school credits a different picture emerges when one distinguishes between the uncertified teachers who stay in the system and eventually become certified and those who leave. A significant portion of the teachers who enter without certification go on to become certified—more than half of each year's crop on average. Among these teachers, the pace of educational attainment is fastest—

topping that of teachers who join the city schools with certification.

Consider the 1,959 teachers who joined the board with bachelor's degrees for the 1995 school year. Out of the 817 who were certified when they started, 62 percent had earned additional credits within four years. Of the 1,142 uncertified teachers entering with a bachelor's, 836 were still uncertified during their fourth year of teaching, and of these, only 40 percent had earned additional credits. In contrast, 75 percent of those who had obtained certification during their first four years had earned credits beyond their bachelor's.



**Experience.** Certified and uncertified teachers alike tend to be inexperienced when first starting out. While it is possible for an uncertified new teacher to be an experienced teacher coming to the board from another state or from an independent or parochial school, an uncertified new teacher typically comes to the city's schools without teaching experience. For those uncertified teachers joining the public schools in 1999, for example, 92 percent came in on salary step 1A, indicating they had no prior teaching experience, public or private. Similarly, certified teachers also overwhelmingly come to the city's schools with no prior paid teaching experience—82 percent came in on step 1A in 1999.

**Salary.** Teachers' salaries are based on experience and educational attainment. Because uncertified teachers generally spend fewer years in the system and acquire additional education more slowly than teachers who are certified, their average earnings are significantly lower. The average salary for uncertified teachers was \$33,357 in 2000, 36 percent less than the average salary for all certified teachers.

Uncertified teachers, subject to a limit on their yearly renewals, tend to have a shorter duration of employment and therefore lower salaries than their certified counterparts. An uncertified teacher who remains in the system as long as legally permissible is subject to a maximum salary step of 4A—worth between \$33,825 and \$42,095, depending on degrees and additional credits earned. In contrast, the maximum salary step attainable by certified teachers is 8B—worth between \$44,017 and \$52,287 plus longevity increments.<sup>8</sup>

In addition to differences in BOE experience, the slower pace of educational attainment that characterizes uncertified teachers also affects salaries. Although initial levels of education are similar for certified and uncertified teachers, certified teachers typically add credits more rapidly. This difference contributes to the overall salary differential.

## WHERE THEY TEACH

Disproportionately large shares of the city's uncertified teachers work in the Bronx, and to a lesser extent in Brooklyn and Manhattan. While 15 percent of all the school system's teachers lacked certification in the 2000 school year, 22 percent of Bronx

teachers were uncertified. In that same year, 16 percent of Brooklyn's teachers were uncertified, as were 17 percent of Manhattan's teachers.

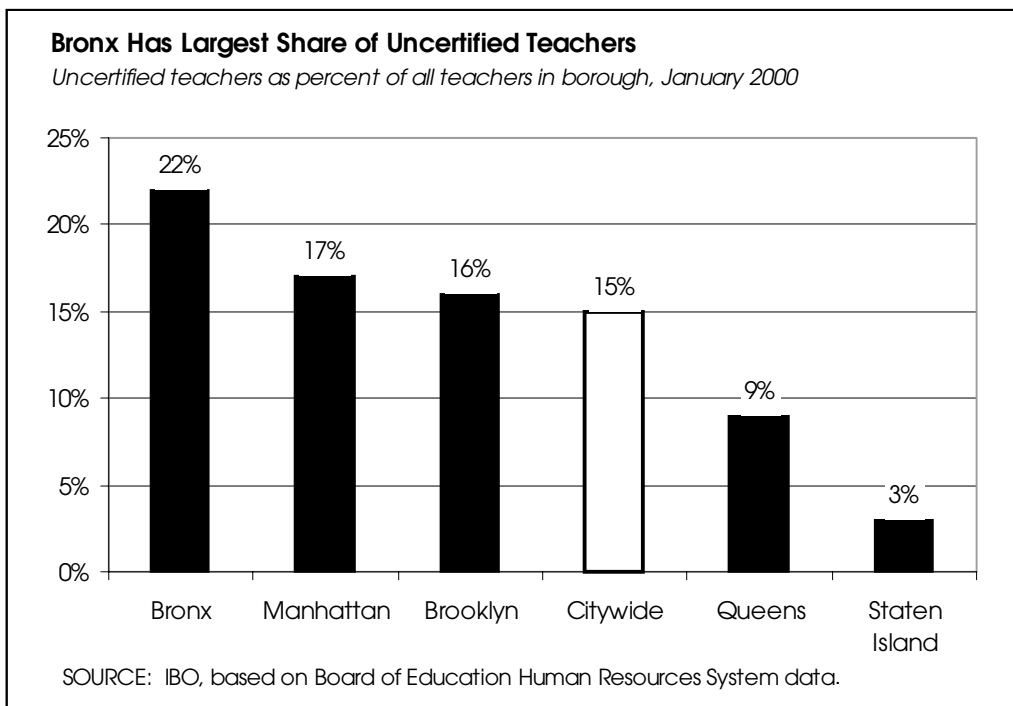
Every Bronx school district except for Community School District 11 has a disproportionately high concentration of uncertified teachers. Half of Manhattan's six districts have disproportionate shares of uncertified teachers, as do roughly three-fifths of Brooklyn's 12 districts. Specifically, uncertified teachers are concentrated in districts 4, 5, and 6 in Manhattan; districts 7, 8, 9, 10, and 12 in the Bronx; and districts 13, 14, 16, 17, 19, 23, and 32 in Brooklyn.

Among the districts with disproportionate shares of uncertified teachers, there are particularly heavy concentrations teaching elementary school bilingual Spanish classes in districts with heavy concentrations of Hispanic students.

Although newly listed SURR schools (schools that have just been identified for the state's list of poorest performing schools) account for a disproportionate share of the city's uncertified teachers, once a school is designated its share of uncertified teachers declines. Between 1994 and 2000, the average share of uncertified teachers in schools that had just been identified for the SURR list was 19 percent, significantly higher than the 13 percent share of uncertified teachers in the total BOE teaching population.

Once a school has been designated as a SURR school, however, the Regents' policy and other initiatives alter the composition of

the school's teaching force. In addition to the Regents' decision to stop allowing SURR schools to hire uncertified teachers, there are also city initiatives in place that target added resources to SURR schools. The effect of these policies has been to reduce the number of uncertified teachers in SURR schools over time. Through 1999 a disproportionate share of the city's uncertified teachers were concentrated in SURR schools. By January 2000, however, uncertified teachers made up 12 percent of all SURR teachers, compared with 15 percent of teachers in the school system overall.



## WHAT THEY TEACH

Uncertified teachers are found in almost every subject area. The state classifies subject areas on the basis of license codes. In 2000, the 48 largest license codes each contained at least 100 BOE teachers. Uncertified teachers accounted for 15 percent or more of all teachers in half of these large subject areas. The highest share of uncertified teachers—45 percent—occurred in high school earth and general sciences.

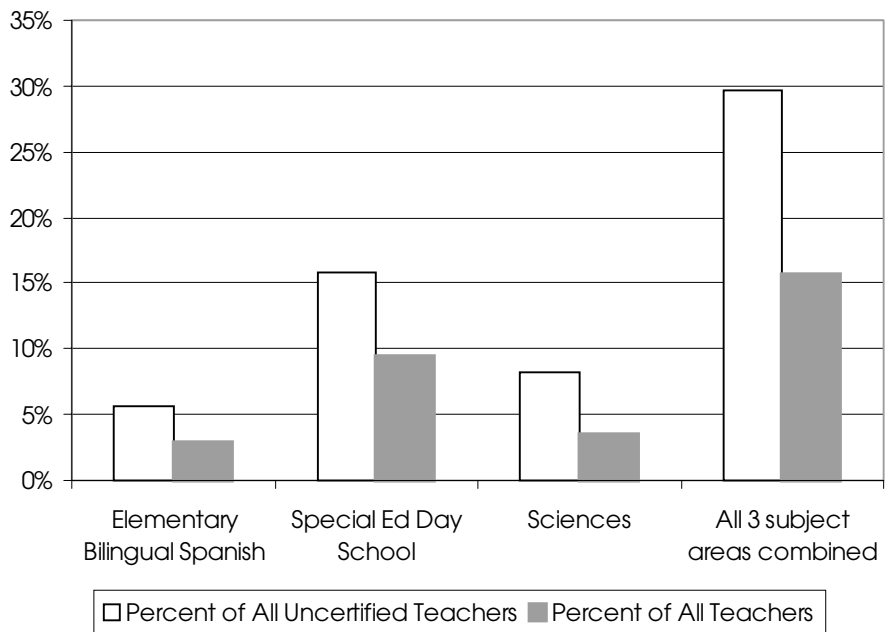
Despite the wide dispersion of uncertified teachers, they are disproportionately concentrated in a few subjects that have been particularly difficult to staff. For example, in the 2000 school year, special education day school teachers made up 9.4 percent of all BOE teachers but uncertified teachers in this category accounted for 15.9 percent of all of the board's uncertified teachers. In elementary school bilingual Spanish classes and high school and junior high school science classes, the disparity was even greater. Elementary school bilingual Spanish teachers accounted for 2.9 percent of all BOE teachers, but 5.7 percent of all the board's uncertified teachers. Among the science teachers, who accounted for 3.5 percent of all BOE teachers, those who were uncertified represented 8.2 percent of the board's total population of uncertified teachers. Combined, the teachers in these subject areas accounted for 16 percent of all BOE teachers but 30 percent of the board's uncertified population.

## CAREER PATHS

While the share of uncertified teachers who achieve certification varies from year to year, IBO's analysis indicates that over 50 percent of the uncertified teachers hired each year eventually become certified.

Consider the group of teachers hired in 1990. Of the 3,194 teachers hired for that school year, 2,425—or 76 percent—were uncertified when they joined the board. Of these uncertified entrants, 17 percent left within their first year of teaching. An additional 12 percent left by the end of their second year without becoming certified and 11 percent more left after three years, also without ever becoming certified. In all, 60 percent of the uncertified teachers, provisional or permanent, who started in 1990 went on to become certified teachers in the the city's

**Three Subject Areas With High Concentrations of Uncertified Teachers**



SOURCE: IBO, based on Board of Education Human Resources System data.

schools. (Not all of these teachers have remained with the board, however. As of January 2000, 47 percent of the teachers hired without certification in 1990 achieved certification and were still actively employed by the board.)

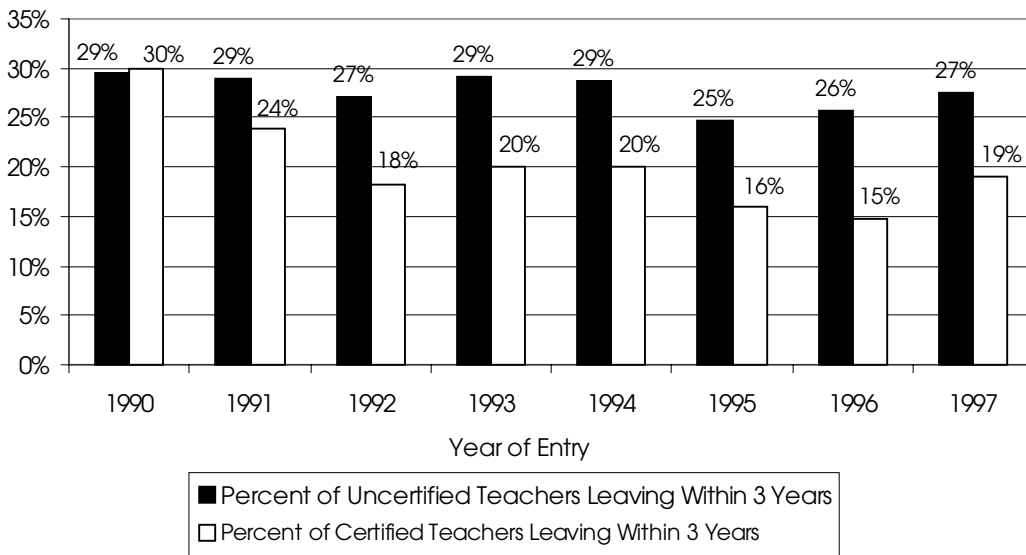
The cohorts of uncertified teachers entering from 1991 to 1993 follow a very similar pattern, with more than 50 percent of each cohort eventually becoming certified. For teachers entering the system since 1994 the measurement is less clear because the window for achieving certification remains open. Thus some of these teachers are still employed by the board, though lacking certification. Of this group, it remains to be seen how many will go on to become certified and how many will simply leave when they reach the maximum number of renewals allowed.

Finally, uncertified teachers leaving within their first few years of teaching account for a disproportionate share of the attrition among new BOE teachers. On average, one-fourth of each cohort of teachers hired by the board since 1990 has left within their first three years, with the rate of attrition higher for uncertified than for certified teachers. Among uncertified teachers, more than one in four left within three years, while the rate was one in five for the certified population.<sup>9</sup>

## CITY AND STATE INITIATIVES

Recently, as part of its effort to raise the quality of teachers and attract more to the profession, the state's Board of Regents has

### Uncertified Teachers More Likely to Leave Within Three Years



SOURCE: IBO, based on data from the Board of Education Human Resources System

### CONCLUSION

Faced with difficulty in recruiting certified teachers, New York City has hired significant numbers of uncertified teachers over the past decade. Over the past few years, the retirement of experienced teachers and the push to reduce class size have exacerbated the city's teacher shortage. At the same time, in an effort to raise teacher quality, the state Board of Regents has curtailed the city's hiring of uncertified teachers for low-performing schools and issued orders that will prohibit the city from hiring

any new uncertified teachers as of September 2003.

Given the push to simultaneously hire more teachers and raise teacher standards, it is particularly important to know more about the city's uncertified teachers—who they are, how they differ from their certified colleagues, and what share eventually achieve certification. The analysis in this report suggests that policymakers wrestling with these competing objectives may want to tailor their solutions to recognize some of the differences among uncertified teachers. In particular, strategies to identify and focus resources on those uncertified teachers who can ultimately obtain state certification might help ease—but not eliminate—the board's task of recruiting and retaining sufficient numbers of qualified teachers.

### Appendix

#### DATA SOURCES

This analysis is based on data provided by the New York City Board of Education Division of Human Resources, from its Human Resource System (HRS)—an automated personnel and payroll information system. The HRS data details the license and service histories of active BOE teachers, those no longer employed by the board, and BOE teachers currently on leave. The Division of Human Resources uses this data to calculate seniority, longevity, and salary steps. HRS data used in the report was current as of January 2000.<sup>10</sup>

For this report, the relevant HRS information for each teacher

taken several steps aimed at increasing the supply of certified teachers. These include creating an alternative certification program designed to recruit career changers and streamlining the process by which teachers certified in other states obtain New York certification. In addition, the Regents have proposed recruiting retired certified teachers to low-performing schools or shortage subject areas.

The Governor's 2001-2002 Executive Budget proposed expanding the statewide Teachers of Tomorrow program, designed to attract teachers to high need schools and subjects using scholarships and incentives. Other Executive Budget proposals include: alternative routes to certification for teachers as well as for uncertified paraprofessionals; salary incentives designed to attract retired public servants to teaching; mentoring for new teachers in low-performing schools; and pension incentives aimed at retaining teachers eligible to retire who are willing to work in difficult to staff schools.

The city, in an effort to staff its low-performing schools with experienced teachers, now offers salary incentives to attract both certified BOE teachers and experienced non-BOE teachers to SURR schools. In August 2000, Chancellor Harold Levy and the United Federation of Teachers entered into an agreement that raises the cap on starting salaries for experienced certified teachers from outside the board thereby giving an incentive to those opting to work in SURR schools. The agreement also provides additional pay to experienced certified teachers within the system who agree to work in those SURR schools that have an extended school day.

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includes: the period of time the teacher is (or was) active; licenses held and when; schools taught in and when; whether or not the teacher is certified at a given point in time; and the teacher's age, current salary, and current contract salary step.<sup>11</sup> After linking the HRS data with information provided by the New York State Education Department on failing schools designated as Schools Under Registration Review, IBO determined whether or not a teacher taught in a SURR school in a given year.

A subset of the HRS data, consisting only of teachers active as of September 2000, was linked with ethnicity and gender data also provided by the Division of Human Resources from their Mainbase File. In addition, IBO linked the HRS data with payroll data detailing the salary, education and experience histories for all teachers who joined the board since 1995.

Finally, background information on the hiring and licensing process was provided by the Office of Staffing, within the Division of Human Resources.

*This report was prepared by Lisa Sturman Melamed.*

## END NOTES

<sup>1</sup> 1990 refers to the 1989-1990 school year. Similarly, all subsequent year references refer to the school year ending in that calendar year.

<sup>2</sup> The data used in this study focuses on actively employed teachers and excludes teachers who have taken a leave of absence and those not assigned to classrooms.

<sup>3</sup> New York City minimum requirements for uncertified teachers are more stringent than for the rest of New York State because other districts do not require 36 subject area credits. In New York City, however, the requirement can be waived when recommended by the school principal.

<sup>4</sup> Prior to September 1998, teachers who had met the other requirements for a Provisional Certificate but did not yet hold a full time BOE appointment could obtain a Certificate of Qualification. This intermediate status has been eliminated by the state.

<sup>5</sup> The State Education Department is presently overhauling its licensing structure. By 2004, the provisional certificate will be replaced by an initial certificate with a more stringent set of requirements, including a masters degree. The permanent certificate will also be replaced by a professional certificate, again with more stringent requirements including ongoing professional development. In addition, beginning in August 2000—outside the period analyzed in this study—the state established a transitional certificate for individuals in alternative teaching career programs such as Teach for America and the board's new Teaching Fellows. While individuals in these programs used to be classified as uncertified when they joined the board, they are now counted as certified.

<sup>6</sup> Despite requests to the State Education Department, IBO was not able to obtain state certification exam results for the teachers in this study. This left

us unable to answer questions such as whether those initially uncertified teachers who eventually became certified had relatively high—albeit failing—test scores compared with those uncertified teachers who left the system without certification.

<sup>7</sup> Median age ranges between 32 and 34 for uncertified teachers and hovers around 47 for certified teachers.

<sup>8</sup> Schedule reflects salaries effective as of December 16, 1999. In practice, it would be rare for a teacher at the upper bound of the 4A salary range to still be uncertified.

<sup>9</sup> In contrast, the rate of first-year attrition is only slightly higher for uncertified teachers (8 percent compared with 7 percent for certified entrants).

<sup>10</sup> One benefit to using the HRS data is that it is not self-reported. This is in contrast to the data typically used to glean information about the teaching workforce statewide. Specifically, the yearly Personnel Master File of the New York State Education Department's BEDS data relies on self-reported information about teachers. Another advantage of this data set is that a teacher's certification status for their teaching assignment in a given year can be directly observed without the need for assumptions regarding the possibility of a teacher being certified in one area but teaching in another.

<sup>11</sup> There are some limits to the data, mostly having to do with records being converted from paper files into computerized records and then from subsequent data entry techniques. As a result, accurate certification data is only reliable since 1990 and is thus available for all teachers who joined the board in the 1989-1990 school year or after.