A Teacher for Every Classroom:
New Teachers in the Baltimore City Public Schools, 1999-2004

Prepared by
Martha Abele Mac Iver, Ph.D.
The Center for Social Organization of Schools
Johns Hopkins University
Baltimore, MD 21218
(410) 516-8256

E. Sidney Vaughn, Ed.D.
Educational Research and Evaluation Consultant
Virginia Beach, VA 23455
(757) 650-2944

Gregory Katz, M.A.
The Center for Social Organization of Schools
Johns Hopkins University
Baltimore, MD 21218
(410) 516-6796

Prepared for
The Abell Foundation
Suite 2300
111 S. Calvert Street
Baltimore, MD 21202-6174

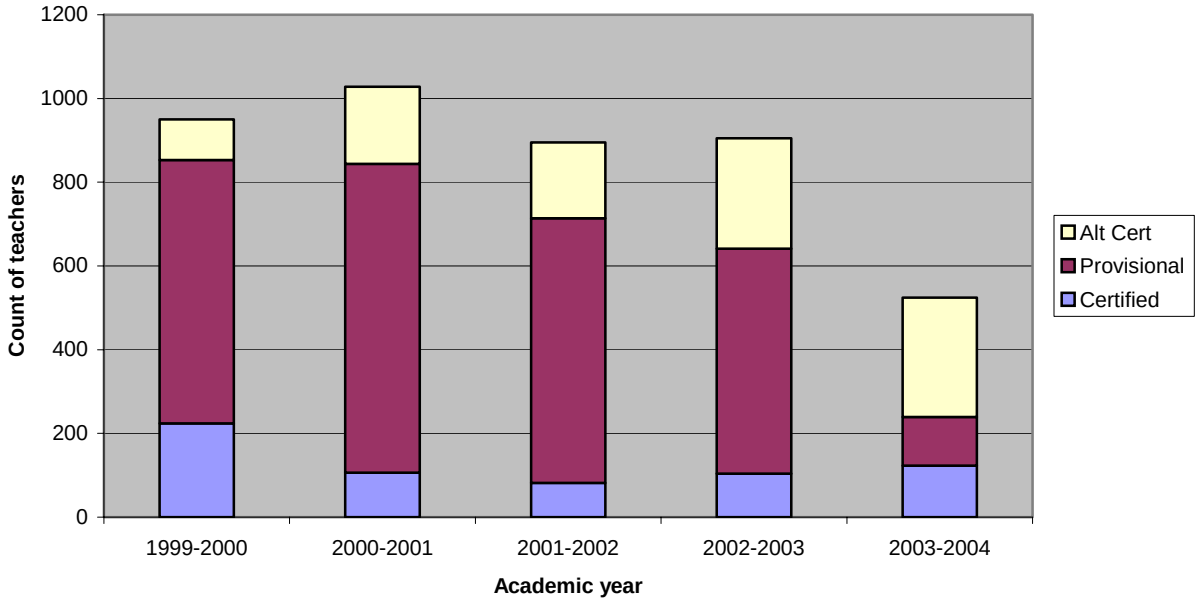
September, 2005

A Teacher for Every Classroom:
New Teachers in the Baltimore City Public Schools, 1999-2004
Executive Summary

- In this study we defined 5 cohorts of new teachers in the Baltimore City Public Schools (from 1999-2000, 2000-01, 2001-02, 2002-03, 2003-04). In particular, the study compared different categories of new teachers: those with full professional certification, teachers in alternative certification programs (Teach for America, the Baltimore City Teaching Residency Program, and Project SITE SUPPORT), and conditionally- (formerly provisionally-) certified teachers who were not participating in alternative. We used data available from BCPSS to describe and trace the trajectory of these teachers.

- The number of new teachers hired by BCPSS ranged from roughly 900 to 1000 during the first four years (1999-2000 to 2002-03), and dropped by nearly half during 2003-04. Both the number and the percentage of teachers in alternative certification programs increased dramatically over the five year period, from 97 (10.2%) in 1999-2000 to 285 (54.3%) in 2003-04. During the middle three years of the study, the percentage of certified new teachers declined vis-à-vis the 1999-2000 baseline year, but this figure rose again in 2003-04. There was also a dramatic decline in the number of "conditionally certified" teachers hired between 2002-03 and 2003-04.

Figure 1. Number of New Teachers Hired by BCPSS



- Teachers in alternative certification programs had higher two- and three-year retention rates than either provisionally- or regularly-certified teachers during the period of study (1999-2004).

- There was considerable attrition among alternative certification program participants between Year 2 and Year 3 (due largely to the fact that TFA teachers completed their commitment to the school system), but the retention rate for the alternative certification programs was higher than for regularly certified teachers at the beginning of Year 3.

- Three-year TFA retention rates (45%, 49%, 50%) were very similar to the three-year retention rates for certified teachers (43%, 50%, 51%) in this study.

- By the beginning of Year 4, retention rates for the alternative certification program teachers began to converge with those of regular teachers, but they were still somewhat higher than for regularly certified teachers. We need to wait for future data to determine longer-term retention rates for alternatively certified teachers in the later cohorts (with more mature program implementation in PSS and BCTR).

- Alternative certification program teachers contributed to filling positions in the high need areas of mathematics, science, and Spanish. The proportion of new mathematics positions filled by teachers in alternative certification programs grew from 4/53 in 1999-2000 to 25/43 in 2003-04. Similarly, more than half (23/38) of the new science positions were filled by alternatively certified teachers in 2003-04, up from 9 of 49 in 1999-2000. By 2003-04, 16 of the 18 new Spanish positions were filled by teachers from alternative certification programs (most with college Spanish majors).

- Most teachers in alternative certification programs were receiving teacher preparation training that led to regular certification.

We were restricted in our analyses by the large amount of missing data in the teacher data files received from BCPSS. In addition, we were not able to make a precise comparison of relative costs to the school system of these alternative certification programs because their structures, administration, and budget designs varied significantly and specific cost figures were not available from the district for the regular district recruitment process. Having complete data on these important factors, and on all teachers in the system, is important for district policymaking.

A crucial question for BCPSS to address is why it has not been more successful in recruiting and retaining certified teachers. Recruitment from alternative certification programs, especially since 2003-04, has been an essential way for the system to fill its classrooms with teachers who are receiving teacher preparation training leading to regular Maryland certification. It may well be that alternative certification programs will be the only means for systems like Baltimore to meet the NCLB requirements for highly qualified teachers. But just like the teachers who enter BCPSS with regular certification, many of those who gain regular certification while on the job teaching in Baltimore City then leave the system. Further research about reasons for teachers' departure and steps that BCPSS could take to improve their rates of retention is particularly important for the school system, since these teachers are likely to have a greater positive impact on student achievement once they have gained several years experience. Keeping these teachers in the system remains a major goal for the system to achieve more successfully.

Background

Considerable debate continues to rage over teacher certification and alternative certification (e.g., Darling-Hammond, 1994, 2000, 2002; Darling-Hammond, Berry, & Thoreson, 2001; Decker, Mayer, & Glazerman, 2004; Goldhaber & Brewer, 2000; Goldhaber & Brewer, 2001; Hess, 2001; Laczko-Kerr & Berliner, 2002; Walsh, 2001), and the federal requirements under the No Child Left Behind legislation for "highly qualified teachers" in every classroom will keep this issue on the policy agenda for years to come. The national teacher shortage has been especially exacerbated in urban districts, and alternative routes to certification for teachers have become important in many states.

Over the past decade, the Baltimore City Public School System (BCPSS) has hired teachers participating in three distinct alternative certification programs: Teach for America (TFA) (a federal program), Project SITE SUPPORT (a federally funded partnership with three local universities), and the Teaching Residency Program, a local program. We term these programs "alternative certification" programs because they provided teachers for the system who did not have regular Maryland teacher certification prior to their hiring, but had alternative routes to regular teacher certification during employment.

Baltimore had its first Teach for America corps members in 1992-93. According to TFA records, there were more than 500 TFA corps members who taught in Baltimore through 2003-04. These individuals were recruited during a rigorous selection process from colleges and universities throughout the country, and received a five-week summer training program prior to placement in city schools. TFA required a two-year commitment to remain in the school system, and corps members were able to pursue certification and master's degrees during their tenure with the school system.

A local "resident teacher" program, designed to recruit individuals from outside the traditional pool of those from teacher education programs, has also been in existence in Baltimore City for more than a decade. There were two distinct phases for the Teaching Residency program during the five-year period under consideration here: the locally based Resident Teacher program (which was phasing out during the first three years covered in this study), and the Baltimore City Teaching Residency (BCTR) program, which began under a new director associated with the national "New Teacher Project" in fall 2002. There is a rigorous selection process for BCTR, and a six-week mandatory training institute for BCTR teachers prior to beginning teaching.

Project SITE SUPPORT was funded by a federal grant to a partnership of several Baltimore area universities working with the Baltimore City Public School System. The grant funding allowed Johns Hopkins University, Morgan State University, and the University of Maryland Baltimore County to conduct a five-year program (1999-2004) in which they recruited more than 700 teachers for BCPSS and provided them mentoring, professional development, and graduate coursework leading to Maryland teacher certification and a master's degree in teaching. Project SITE SUPPORT also provided an "electronic learning community" for its participants that served as an information center, virtual meeting place, and repository of significant resources.

It is important to note that Project SITE SUPPORT actually delivered the same university graduate coursework as the traditional teacher preparation program, but did so while teachers were employed as the "teacher-of-record" in classrooms rather than completing the program prior to their employment. Indeed, Project SITE SUPPORT might be best understood as a traditional program with an alternative delivery system.

In fact, many participants in Teach for America and the Baltimore City Teaching Residency Program were also enrolled in university teacher preparation programs that similarly blur the distinctions between alternative and traditional preparation programs. Thus, there was actually considerable intermingling of the three alternative certification programs. Large proportions of TFA teachers were also enrolled in the JHU master's program, particularly in the first three cohorts, and similarly, many BCTR teachers were also enrolled in master's programs. Tuition for the master's degree program for these alternatively certified teachers was reimbursed by BCPSS in return for a five-year commitment to remain with the system.[1]

This study, commissioned by The Abell Foundation, analyzes new teachers hired by the Baltimore City Public School System over the past several years. In particular, the study compares different categories of new teachers: those with full professional certification, teachers in alternative certification programs (Teach for America, the BCPSS Teaching Residency Program, and Project SITE SUPPORT), and conditionally (formerly provisionally) certified teachers who were not participating in alternative programs. Although this preliminary study cannot link teacher characteristics to student achievement directly, it lays the foundation for future research in which this relationship can be examined. This study sought to address whether alternatively certified teachers provided the school system with:

- More subject area expertise at secondary level (measured by college major or minor) than available from other new teachers
- Higher PRAXIS scores (PRAXIS 1, PRAXIS 2a (content area) and PRAXIS 2b (pedagogy)
- Higher rates of retention
- Lower rates of non-renewal

Directors from Baltimore Teach for America, Project SITE SUPPORT, and the BCPSS Teacher Residency program collaborated with the BCPSS Human Resources department so that BCPSS could provide CSOS with datasets containing teacher level variables (excluding all identifying material) for each of the study years.

[1]PSS teachers' tuition was approximately split between the Federal government and the BCPSS. The teachers signed a contract with the Federal Department of Education that required them to pay back that portion of their tuition if they did not complete a one year service agreement after their graduation from the program. They also signed a contract with BCPSS that required them to pay BCPSS back for their contribution if they did not complete three additional years of service after graduation. In each case they taught during the two years that the master's program took, and there was a kind of a sliding scale so that partial fulfillment of the service agreement resulted in only a partial payback. In addition, certified new teachers also participated in programs in which their tuition for a master's program was similarly reimbursed by BCPSS in return for a five-year commitment to remain with the system (e.g., the Teachers for Tomorrow program at Towson University).

Study Research Questions

We defined five cohorts of new teachers in BCPSS (from 1999-2000, 2000-01, 2001-02, 2002-03, 2003-04). The most recent available data from BCPSS were from 2003-04, and the full time period coincided with the Project SITE SUPPORT program, and mature implementation of the Teach for America program in Baltimore. We then used data available from BCPSS to describe and trace the trajectory of these teachers over time. We show this schematically below.

Figure 1. Summary of Longitudinal Teacher Cohort Study

New Teacher Cohorts	Information from Teacher Data Base				
	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004
1999-2000					
2000-2001					
2001-2002					
2002-2003					
2003-2004					

Not Applicable
Descriptive data about new teachers
Outcome data about new teachers

Descriptive data about the new teachers in each cohort (demographic information, entry level degree, college attended, etc.), listed in the leftmost column in the table above, were available for each set of new teachers in the BCPSS dataset for their year of entry. We then followed teachers forward in subsequent years' datasets (depicted in the table's other columns) to ascertain whether they were still teaching with the system and what degrees and certifications they acquired over time. As is obvious from the table above, it was possible to obtain five-year retention data for just one cohort, four-year retention data for two cohorts, and so on.

Dataset Construction and Data Limitations

BCPSS supplied teacher datafiles for each cohort year that were matched with datafiles from the alternative certification program records. New teachers were identified based on the BCPSS system "entry date" variable in each file. Because of variations in the way entry dates were assigned by the system (including previous employment in non-regular teaching positions, such as aides or substitutes), it was not possible to match data for all participants listed in BCPSS program records of the alternative certification programs. In fact, in some other cases, active teachers in these programs where not recognized as being in the alternative program as evidenced by the BCPSS coding system This led us to exclude some teachers from the analysis of alternative programs.

While most of the alternative certification teachers are included in the analyses presented here, some (e.g., those who may have taught for a few months prior to joining an alternative program) are actually included among the conditionally certified group, as they first entered BCPSS in this capacity. This may have small effects on the study's results.

New Teacher Cohorts

Table 1 summarizes the number of teachers hired in each of the five cohort years, by category.[2] The number of teachers hired ranged from roughly 900 to 1000 during the first four years, and dropped by nearly half during 2003-04. [3] Because many of the teachers hired during the year could well have been replacements for teachers who left during the year, we also present a "net teachers hired" figure for each year. Figure 2 below shows the number of teachers hired in each category.

Both the number and the percentage of teachers in alternative certification programs increased dramatically over the five-year period, from 97 (10.2%) in 1999-2000 to 285 (54.3%) in 2003-04. During the middle three years of the study, the percentage of certified new teachers declined vis-à-vis the 1999-2000 baseline year, but this figure rose again in 2003-04. There was also a dramatic decline in the number of "conditionally certified" (formerly termed "provisionally certified) teachers hired between 2002-03 and 2003-04. This was probably due to the new requirements of the No Child Left Behind (NCLB) legislation regarding the need for "highly qualified" teachers in classrooms.

[2] Data are disaggregated by PSS university site in later tables.

Figure 2. Number of New Teachers Hired by BCPSS

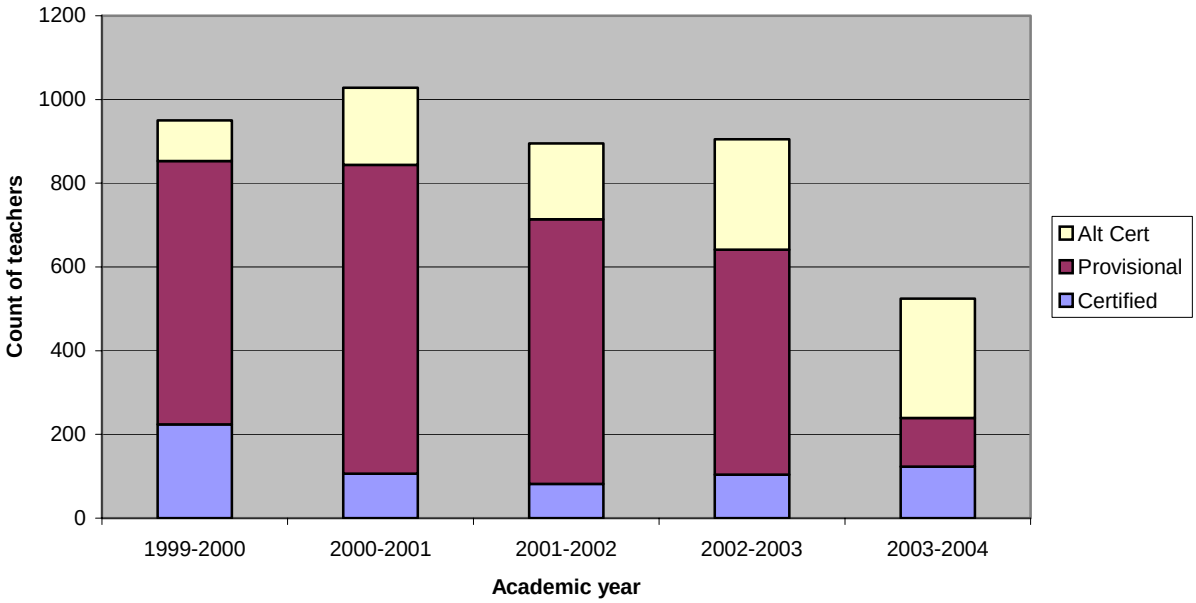


Table 1 also summarizes figures for alternative certification program participation (excluding those teachers for whom it was not possible to match BCPSS records). The Teachers for Tomorrow program at Towson University, which recruited already certified teachers to complete a master's program and commit to remaining with BCPSS for five years, is also included in the table. In Tables 2 – 3 we compare the demographic characteristics of the various groups of new teachers. Two-thirds or more of the new teachers hired each year were female. Certified teachers were more likely than both provisional teachers and alternative certification program teachers to be female. In all cohorts except 2003-04, the number of new African American teachers was nearly equal to or greater than the number of white teachers hired. Among certified teachers, there was a much higher percentage of white teachers than African American, while the reverse was true for provisionally certified teachers. There were higher numbers of African Americans in the PSS program than in the Teaching Residency and TFA programs.

Because reliable information was not available about all teachers' states of residence before they were hired by BCPSS, we used the state of the college attended as a surrogate. Because there was a considerable amount of missing data in this field (more than 50% missing in 2001-02), the findings in Table 4 should be interpreted with caution. The table reports the percentage of the <u>total</u> number of teachers who were coded as attending Maryland colleges. When missing data were excluded, more than half of the new teachers hired (for whom college information was available) were from Maryland colleges for the first three cohorts, but those from out-of-state colleges outnumbered those from Maryland colleges in 2002-03 and especially in 2003-04. Alternatively certified teachers were much less likely than others to have attended Maryland colleges.

Previous Experience of New Teachers

As one might expect, certified teachers brought the most prior teaching experience to BCPSS, ranging from an average of 1.34 years in 1999-2000 to about 3 years in 2002-03 and 2003-04 (Table 5).

College/University Background of New BCPSS Teachers

There was also some variation in the educational background of new teachers. Most new teachers come to BCPSS with a bachelor's degree. Table 6 indicates the percentage in each category who enter the system with a master's degree or higher. Except in the first cohort, this percentage was highest each year among already certified teachers, followed by the provisionally/conditionally certified group, and then those in alternative certification programs (who are often recruited with the incentive of earning a master's degree).

Table 7 summarizes the types of colleges and universities from which BCPSS new teachers come.[4] The largest number of teachers hired each year came from Morgan State University, Coppin State University, Towson University, and the various campuses of the University of Maryland. The single university that provided the most certified new teachers for BCPSS over this five-year period was Towson University. BCPSS tended to recruit nearly half of its certified teachers from out-of-state institutions.

Because student achievement has been positively linked to teachers' verbal ability (see review by Darling-Hammond, 2002), and attendance at more selective colleges with more rigorous admission requirements tends to be associated with higher verbal ability, we explored the distribution of teachers from various types of colleges. Compared to the regularly certified and provisionally/conditionally certified teachers, much larger proportions of teachers enrolled in the alternative certification programs (particularly TFA) came from highly selective colleges (defined here as colleges from the Peterson's Guide list of colleges accepting fewer than half of their applicants), which include Johns Hopkins University and the Maryland Institute College of Art. And except for the first cohort year, when the alternative certification group was smallest, these programs brought in larger numbers of teachers from highly selective colleges than did the regular hiring channels. We were unable, however, to address the relationship between student achievement and teachers' college backgrounds in this study.

Characteristics of Provisionally Certified Teachers

As the analysis of teacher background characteristics above indicates, those teachers who lacked regular certification and who did not participate in alternative certification programs, termed "provisionally," or later, "conditionally" certified, were a diverse group. In each cohort they were majority African-American, though the percentage of white teachers in this group was larger in the later cohorts. They ranged from 30% male in earlier cohorts to about 40% male in 2003-04. They came from a variety of colleges both inside and outside Maryland, including

[4] Unfortunately, there is considerable missing data in this field in the data supplied by BCPSS. In addition, it appears that in some cases the community college was recorded rather than the college that granted the bachelor's or master's degree.

some that were highly selective. They were less likely than certified teachers to enter the system with master's degrees, but 1 in 10 or more did have a master's degree when entering the system.

Assignment of New Teachers

There was some variation in how new teachers were assigned to types of schools, as Tables 8 and 9 indicate. Unfortunately, there is considerable missing data on school assignment in the earlier cohorts, and there may be differences among the groups in placement that cannot be ascertained from the available data. Based on the data available, elementary schools were more likely than middle and high schools to receive certified teachers to fill their vacancies. Teachers in alternative certification programs were distributed throughout the system at all levels.

High Need Areas

One of the research questions in this study was whether teachers in alternative certification programs contributed to meeting BCPSS personnel requirements in "high need areas" such as mathematics, science, Spanish, and special education. BCPSS communicated its subject area needs to the alternative certification programs, asking for recruitment in those particular areas. Our analysis design included comparing the various groups of teacher on college major and minor to determine whether the alternative certification program teachers were more likely than provisional/conditionally certified teachers to have significant college coursework in the subject they were teaching (particularly in mathematics and science). Unfortunately, however, data on teachers' college majors or minors were not available from BCPSS until 2003-04 (the year that many NCLB requirements for school systems began). Beginning in 2003-04, BCPSS supplied information of college major for about 75 percent of teachers. Some college major data were also available from the various alternative certification programs

Over the past five years, BCPSS hired roughly 50 new mathematics teachers a year. Until 2003-04, the number of certified mathematics teachers hired was very small, and most mathematics teachers were provisionally certified. As Table 10 shows, the proportion of these positions being filled by teachers in alternative certification programs grew from 4/53 in 1999-2000 to 25/43 in 2003-04. As the table shows, generally at least half of the alternative certification program teachers had significant mathematics coursework. It is possible that provisionally certified teachers also had such coursework, though with the data currently available, this is not possible to verify one way or the other.

Similarly, BCPSS hired roughly 50 new science teachers[5] each year over the same period until 2003-04, when this number dropped to 38 (Table 11). The number of certified science teachers was also low, but rose in 2003-04 when 8 of 38 of the new science teachers were certified. TFA teachers appeared to make a notable contribution in providing the system with teachers with extensive science coursework in college. PSS also supplied the system with a large number of new science teachers. Again, it is possible, but unverifiable, that other alternative

[5] The Maryland staffing report does not include biology among the high need science areas, but BCPSS designated all science areas, including biology, as high need areas in its communications with alternative certification programs.

certification program participants and provisionally certified teachers not enrolled in alternative programs also brought the system similar backgrounds.

Spanish was another high need area, for which BCPSS found no certified teachers for three of the years, and only one certified teacher in each of the other two years of this study. The alternative certification programs supplied half the Spanish teachers for two of the years, and 16 or 18 teachers in 2003-04. In particular, the TFA program supplied teachers with Spanish majors to staff those BCPSS classrooms (Table 12).

The alternative certification programs included in this study were not specially designed to help provide teachers in the high need area of special education. The BCPSS Resident Teacher Certificate Program in Secondary Special Education (affiliated with Goucher College) specifically addresses that need at the secondary level. As Table 13 indicates, very few teachers in alternative certification programs had a special education assignment. The number increased notably in 2003-04 (to 11 of 42), all of whom were placed in elementary or elementary/middle schools. Since these teachers were not placed in secondary schools, their content area training in college was not particularly relevant in judging their contribution to BCPSS. As would be expected, none had a college level major or minor in special education (in contrast to several of the certified teachers).

Retention of New Teachers

For each cohort of new teachers, we determined how many began the year[6] with the school system and remained with the school system at the end of each school year. With data through 2003-04, we have five years of retention data for the first cohort of new teachers (1999-2000), four years of data for the 2000-01 cohort, and so on (Table 14). Figures 3-6 summarize the retention picture for each of the four oldest cohorts. In general, only about two-thirds of the new teachers not involved in alternative certification programs returned to BCPSS for a second year, while the second-year retention rate for teachers in alternative certification programs has been much higher (80% or more). BCPSS even lost more than 10% (and in one year more than 20%) of the regular new teachers it hired before the end of the first school year (many in the first month of school). Some attrition continued during the second year for each cohort, and by the beginning of Year 3 only half or less of the original regular new teacher cohort remained.

There was also considerable attrition among alternative certification program participants between Year 2 and Year 3 (due largely to the fact that TFA teachers complete their commitment to the school system), but the retention rate for the alternative certification programs was higher than for regular teachers at the beginning of Year 3. By the beginning of Year 4, retention rates for the alternative certification program teachers began to converge with those of regular teachers (though in the second cohort, they were slightly higher). We need to wait for future data (to determine whether alternatively certified teachers in the later cohorts (with more mature program implementation in PSS and RT) continue to have higher rates of retention by Year 4.

[6] To simplify analyses, we used the total number of teachers hired during the year as the baseline denominator, even though many of the teachers hired throughout the cohort year were undoubtedly replacements for those who left earlier during that first year. The "end of year" percentage includes teachers who remained until the end of the year but had a termination date in late June.

Table 15 summarizes the numbers of teachers in each alternative certification or special program who remained with BCPSS over time. (Because of small numbers, the raw numbers were more meaningful than the percentages.) As expected, teachers in TFA were less likely to remain with the school system than teachers in other programs, though some have stayed beyond their commitment. In fact, three-year retention rates for TFA were as high as three-year retention rates for certified teachers in BCPSS. All programs have suffered notable attrition, particularly after the third year, but no more attrition (and potentially less) than teachers hired through the regular process. Teachers who attended Maryland colleges (our surrogate variable, admittedly faulty, for Maryland as a home state) did tend to remain with the school system at a higher rate (with differences of 5-12 percentage points) than those from colleges outside Maryland.

Analysis of teacher retention in Philadelphia (Neild, Useem, Travers, & Lesnick, 2003) suggests that attrition may be considerably higher in poorer schools and especially poorer middle schools. Our analyses of BCPSS teacher data showed only a slightly lower new teacher retention rate for middle schools and Title I schools. The problem was widespread, across all sorts of schools.

Complete data on whether teachers' contracts were not renewed because of unsatisfactory performance was not available from BCPSS.[7] For this reason, it was not possible to compare types of teachers on this outcome variable.

Certification Progress

Tables 16-19 indicate the number and percentage of provisionally certified teachers in each category that gained Maryland certification and remained with the system each year after their original hire. The percentage of provisionally certified teachers hired in 1999-00 that went on to gain certification and remain with BCPSS was relatively low (not quite 11% by the end of the 4th year). As noted earlier, there was a very large attrition rate for those teachers. The percentages look much better for the alternative certification programs, but their numbers are small. And it is apparent that in the first two study cohorts, several of the teachers in alternative certification programs (particularly TFA) gained certification and then left the system. Percentages of provisionally certified teachers gaining certification and remaining with the system appear to increase in the later cohorts. Further research on the outcomes for the later cohorts will be useful, since it is too early for the later cohorts to know how many of those who gained certification actually remained with BCPSS.

Progress toward Master's Degree

In Tables 20 – 23 we show the number of teachers who entered the system with a bachelor's degree who went on to obtain a master's degree and still remained teaching within

[7] The non-renewal data field was empty for the first two cohorts, though a code in another field indicated a "do not rehire" decision. In the third (2001-02) and fourth cohorts (2002-03), the number of teachers in the "Do not rehire" category greatly exceeded the number of teachers in the "nonrenewal" category, though almost all of those with nonrenewal flags also had a "do not rehire" code. By the 2003-04 school years, only a handful of teachers (3) had a nonrenewal code, and it was not clear whether more teachers actually belonged in this category.

BCPSS.[8] The data from BCPSS records may underestimate the number who earned master's degrees in the alternative certification programs, especially if the degrees were conferred after the teacher left BCPSS. It is evident from Tables 20 and 21 that the percentage of certified teachers and teachers in alternative certification programs who earned master's degrees during their tenure with BCPSS tended to rise and then fall off (indicating some exodus after completion of the degree). Again, it is too early to tell how many of the teachers in the later cohorts of the alternative certification programs will remain with the system after completion of their master's degrees.

Praxis Scores

Teachers' scores on the PRAXIS test were available from BCPSS only for 2003-04 (probably because of the new NCLB reporting requirements, and the creation of a new database system), and only for about one-third of the new teachers in 2003-04. We were unsuccessful in obtaining additional test score data from district personnel files. Because of such a large percentage of missing data, and since we could not ascertain the extent of the bias in the data available, we are unable to report any summary results about Praxis scores. The dataset we received contained no non-passing Praxis scores, and so we are not able to document, as others have done in Philadelphia, the rates at which provisionally certified teachers had not passed the PRAXIS (Neild, et al., 2003). One might expect that the group of teachers with higher rates of attendance at selective colleges (TFA teachers, whose average SAT score was reported as 1310) would have higher Praxis I (general knowledge) test scores. Whether or not such teachers with higher Praxis scores, who make just a two-year commitment to remain with the school system, help to raise student achievement significantly remains to be demonstrated in another study (see Decker, Mayer, & Glazerman, 2004).

CONCLUSION

This study documents some of the contributions made by alternative certification programs to the BCPSS teacher recruitment efforts. During the first two years after their hiring date, teachers in alternative certification programs were notably more likely to remain with the system than either certified teachers or conditionally certified teachers not involved in programs. While most of the Teach for America teachers tended to leave by the end of Year 3, teachers in other alternative certification programs, such as PSS, remained with the system at higher rates than regularly certified teachers through years 4 and 5. Three-year retention rates for TFA were as high as three-year retention rates for certified teachers in BCPSS.

While many teachers in the alternative certification programs did leave the system after gaining a master's degree and certification, they made a contribution during their stay. Teachers in alternative certification programs helped to fill openings in high need areas, and brought particular content knowledge in science, mathematics and Spanish that was difficult for the system to find elsewhere. In a system where there are not always enough math teachers for all high school students, even a short-term teacher with content area knowledge was helpful. The Teach for America program, in particular, brought teachers with excellent academic

[8] Teach for Tomorrow teachers were excluded from these tables.

credentials to the system. Project SITE SUPPORT and the Baltimore Teaching Residency program brought a more diverse group of teachers to the system.

A crucial question for BCPSS to address is why it has not been more successful in recruiting and retaining already certified teachers. Recruitment from alternative certification programs, especially since 2003-04, has been an essential way for the system to fill its classrooms with teachers who are receiving teacher preparation training leading to regular Maryland certification. It may well be that alternative certification programs will be the only means for systems like Baltimore to meet the NCLB requirements for highly qualified teachers. But just like the teachers who enter BCPSS with regular certification, many of those who gain regular certification while on the job teaching in Baltimore City then leave the system. Further research about reasons for teachers' departures and steps that BCPSS could take to improve their rates of retention is particularly important for the school system, as these teachers are likely to have a greater positive impact on student achievement once they have gained several years experience. Keeping these teachers in the system remains a major goal for the system to achieve more successfully.

District Data Collection and Data-Based Decision Making

It was evident that the new reporting requirements under NCLB, together with the creation of a new human resources database in 2003-04, increased the data available to BCPSS for understanding the characteristics of its teaching workforce. In particular, the addition of PRAXIS scores and college major in the 2003-04 data (unavailable in previous datafiles) provided important additional information about the system's teaching force. At the same time, there was considerable missing data in these fields, as well as in other fields (particularly degree earned and college/university attended, as well as non-renewal decisions). Having complete data on these important factors, and on all teachers in the system, is important for district policymaking.

In this report, we were not able to make a precise comparison of relative costs to the school system of these alternative certification programs because their structures, administration, and budget designs varied significantly and specific cost figures were not available from the district for the regular district recruitment process. But some general findings about recruitment costs do emerge from this study. When school systems like BCPSS cannot recruit sufficient numbers of teachers who already hold a teaching certification, they indeed face the high costs of tuition reimbursement for teachers to acquire Maryland certification. Teachers who come to the school system already certified obviously cost the system less in tuition reimbursement than those who require coursework to become certified. While most of these certified teachers would pursue additional college coursework eventually, to retain their certification and pursue graduate degrees, the tuition reimbursement costs would be smaller and spread over a longer period of time. But given the shortage of certified teachers from Maryland (and even other states) willing to teach in urban districts like Baltimore, alternative certification programs have been essential for recruiting "highly qualified" teachers for the district's classrooms.

Are there less costly alternatives than these alternative certification programs? It would appear useful for the district to assess the specific costs (e.g., in higher salaries and benefits, additional recruiting efforts in other states, etc.) of successfully recruiting more already-certified

teachers to the district so that more precise cost comparisons can be made. The recent initiatives to recruit teachers from outside the United States (primarily the Philippines), who meet the qualifications for Maryland certification except for passing the PRAXIS examination, appear to be an attempt to reduce the tuition reimbursement costs associated with alternative certification. But future analyses will need to be conducted to determine the extent to which these teachers from outside the U.S. complete the Maryland certification requirements, remain with the school system, and contribute to raising student achievement. For the time being, the alternative certification programs appear to be <u>essential</u> for helping to staff all the district's classrooms.

Appendix A: Comparative Teacher Retention Rates

The BCPSS teacher retention rates were broadly similar to rates in other urban areas for which data are available.[9] The one-year retention rate for BCPSS from 1999 to 2003 was generally 85-90%, with provisionally certified teachers falling below the mean, and higher retention rates for alternative certification teachers. Studies have found approximately an 84% one-year retention rate for teachers nationwide, and nearly identical numbers for teachers in urban schools (Ingersoll, 2001; Ingersoll, 2003). The one-year retention rates have been found to vary noticeably from municipality to municipality and between forms of certification. For example, New York City recently reported a one-year retention rate of 75-81% for all incoming teachers, with between an 85-90% retention rate for alternative certification teachers (NY Education Department 2004, 2005; New York City Council, 2003). ACORN (2003, 2005) found that Chicago retains approximately 77% of all teachers per year, but with only 61% first-year retention. Philadelphia was retaining 73% of its first-year teachers, but recently improved that rate to 91% (Neild et al. 2005). At the high end of the spectrum, southern Florida reportedly averages a 96% one-year retention rate (Wattlington et al., 2004). At the other end of the spectrum, provisionally certified teachers in Los Angeles have a one-year retention rate of approximately 50% (Schindler et al., 2004). With these numbers in mind, the BCPSS retention rates are comparable or slightly favorable to what is observed in other similar geographic areas.

The BCPSS retention rates began to drop slightly relative to norms in the second year. BCPSS averaged approximately a 68% two-year retention rate for its educator workforce. The variation around this average was somewhat pronounced, with provisional teachers averaging approximately 60% retention, and alternative certification teachers averaging approximately 80% retention. Nationally, the average two-year retention rate was 76% (Ingersoll, 2003). To illustrate some of the variation behind the national average, the two-year retention rate for all new teachers in Texas is approximately 75-84% (Herbert, 2004; SBEC, 2002; TEA, 2003). Philadelphia was retaining only 58% of its second-year teachers, but recently improved that rate to 85% (Neild et al., 2005). In New York City, alternative certification teachers have a two-year retention rate of approximately 75-83% (NY Education Department 2004; New York City Council 2003).

Studies of three-year retention have shown a great deal of flux in the teacher workforce. Data in the National Center for Education Statistics (NCES) show a national average of 67% three-year teacher retention (Ingersoll, 2003). Philadelphia has in the past maintained approximately a 49% three-year retention rate (Neild et al., 2003, 2005), and New York City has a 62-65% three-year retention rate (NY Education Department, 2004). BCPSS averaged approximately 51% retention after three years, which is below the reported national averages but close to the NYC estimates and similar to Philadelphia. It is important to recall that the time period of our Baltimore study was one of considerable turnover in district leadership and that retention rates could have been influenced by the district instability in the particular years for which three-year retention rates are available.

Variation in rates within the BCPSS teacher corps was not particularly pronounced after three years. Provisionally certified teachers and fully certified teachers in BCPSS had approximately 48% three-year retention rates. Alternative certification teachers averaged 56%

[9] See below for a chart summarizing the research findings.

three-year retention. This is a more positive finding regarding retention in alternative certification programs than in other studies, which have shown low three-year retention rates relative to other teachers. After three years, most (if not all) alternative certification teachers have completed their programs and can pursue work at other schools. *Teach For America* teachers, for example, reportedly have a three-year retention rate of approximately 40% nation-wide (Archer, 2003). The three-year TFA retention rates for Baltimore found in this study ranged from 45% to 50%. In Chicago, alternative certification teachers report a 39-43% three-year retention rate (Williams 2004). In BCPSS, the alternative certification teachers had a three-year retention rate that was somewhat higher than the comparable national data, and was higher than the other groups of BCPSS teachers (those that are fully certified or provisionally certified). This is a very positive sign for alternative certification programs, if these rates continue to hold up over time. The BCPSS rates were probably influenced by the other programs, in addition to Teach for America (with its virtually "built-in" short term character), that are in existence.

Four-year and five-year retention rates in BCPSS were based on just one or two teacher cohorts, and may have been influenced by particular issues in those particular years (including considerable turnover in district leadership, and high numbers of provisionally certified teachers who could not continue with the system without gaining certification). The BCPSS rates for this time-frame, based on limited data, lagged substantially behind national averages. Data in the NCES has shown a national average of 60% four-year retention, and 54% five-year retention (Ingersoll, 2003). BCPSS averaged 37% and 29% respectively. In New York City, teachers have a four-year retention rate of approximately 52% (NY Education Department 2004). Philadelphia has a four-year retention rate of approximately 43% (Neild et al., 2003). We were unable to find data on five-year retention in either the Philadelphia or New York school districts. Data available in other urban areas, such as Chicago and Seattle, show five-year retention rates that are similar to the national average (i.e., approximately 54%) (Plecki et al., 2005; Asa, 1998).

It will be important to conduct additional longitudinal analyses on the later cohorts in this study to determine whether four- and five-year retention rates increase, particularly for the alternative certification program participants (since the three-year rates were higher than other districts). Additional investigation into the attrition of the BCPSS teacher workforce is also needed to determine the extent to which BCPSS teachers are leaving to exit the profession or are leaving to work in other nearby municipalities.

Summary of Research on Teacher Retention

	All new teachers	Alt cert. Teachers	Other teachers	Years/cohorts	Methodological Notes	Reference
1-year						
Nationwide	84%		84% (urban areas)	1988; 1991; 1994; 2000	Sample of NCES data (SASS/TFS)	Ingersoll 2001, Ingersoll 2003
New York City	75-81%	85-90%		[a] 2001;2002;2003 [b] unknown	[a] NY Ed Dept. data [b] unknown	NY Education Department 2004[a]; New York City Council 2003[b]
Chicago	61%			2001	Sample of 64 schools; State Board of Ed. data	ACORN 2005
South Florida	96%			2001 cohort	School district data	Wattlington et al. 2004
Philadelphia	73%			2000; 2001; 2002; 2003; 2004	School district data	Neild et al. 2003, 2005
Los Angeles			50% (provisional cert.)	Unknown	Data presented anecdotally; not a quantitative study	Schindler et al. 2004
2-year						
Nationwide	76%			1988; 1991; 1994; 2000	Sample of NCES data (SASS/TFS)	Ingersoll 2003
Texas	75-84%	81-84%				Herbert 2004; SBEC 2002; TEA 2003
Philadelphia	58%			2000	School district data	Neild et al. 2003, 2005
New York City		75-83%		[a] 2001;2002;2003 [b] unknown	[a] NY Ed Dept. data [b] unknown	NY Education Department 2004; New York City Council 2003
3-year						
Nationwide	67%			1988; 1991; 1994; 2000	Sample of NCES data (SASS/TFS)	Ingersoll 2003
New York City	62-65%			2001; 2002; 2003	NY Ed Dept. data	NY Education Department 2004
Nationwide		40% (TFA)		Unknown	Data presented anecdotally; not a quantitative study	Archer 2003
Philadelphia	49%			2000	School district data	Neild et al. 2003, 2005
Chicago		39-43%		2001	Data presented anecdotally; not a quantitative study	Williams 2004

Appendix A: Summary of Research on Teacher Retention (continued)

	All new teachers	Alt cert. Teachers	Other teachers	Years/cohorts	Methodological Notes	Reference
4-year						
Nationwide	60%			1988; 1991; 1994; 2000	Sample of NCES data (SASS/TFS)	Ingersoll 2003
Texas	68-76%					Herbert 2004; SBEC 2002
New York City	52%			2001; 2002; 2003	NY Ed Dept. data	NY Education Department 2004
Philadelphia	43%			2000	School district data	Neild et al. 2005
5-year						
Nationwide	54%			1988; 1991; 1994; 2000	Sample of NCES data (SASS/TFS)	Ingersoll 2003
Texas	63-74%					Herbert 2004; SBEC 2002
Chicago	50-60%			Unknown	Unpublished research by S. Tozer, U of Ill. - Chicago	Asa 1998
Seattle	49%					Plecki et al. 2005
Mid-west	49%		41% (urban)	1996 cohort	School district data (four states, approx. 12,000 teachers)	Theobald & Michael 2001
Ohio	72.0%		60.2% (urban)			Fleeter & Driscoll 2002

References

ACORN – Chicago (June 2003). *Where Have All of the Teachers Gone?: The Costs of Teacher Turnover in ACORN Neighborhood Schools in Chicago*. Retrieved March 30, 2005, from http://www.acorn.org/index.php?id=8045

ACORN –Illinois (February 2005). Here one Year Gone the Next: Summarizing the Teacher Turnover Data for 64 ACORN Neighborhood Schools, 2002-2003 to 2003-2004. Retrieved April 29, 2005, from http://www.acorn.org/fileadmin/ACORN_Reports/ACORN_turnover_study.pdf

Archer, J. (January 9, 2003): Thwarted by Fact and Fiction. *Education Week*, 22(17), 22-25.

Asa, R. (1998, March). Recruiting, Retaining Quality. *Catalyst*. Retrieved March 30, 2005, from http://www.catalyst-chicago.org/03-98/038main.htm

Darling-Hammond, L. 1994. Who will speak for the children? How 'Teach For America' hurts urban schools and students. *Phi Delta Kappan* 76(1): 21–34.

Darling-Hammond, L. (2002, September 6). Research and rhetoric on teacher certification: A response to "Teacher Certification Reconsidered." *Education Policy Analysis Archives* 10(36). Retrieved July 1, 2005 from http://epaa.asu.edu/epaa/v10n36.html.

Darling-Hammond, L. 2000. "Reforming teacher preparation and licensing: Debating the evidence." *Teachers College Record* 102(1): 28–56.

Darling-Hammond, L., B. Berry, and A. Thorenson. 2001. "Does teaching certification matter? Evaluating the evidence." *Educational Evaluation and Policy Analysis* 23(1): 57–78.

Decker, P., Mayer, D., & Glazerman, S. (2004). *The effects of Teach for America on students: Findings from a national evaluation*. Princeton, NJ: Mathematica Policy Research.

Goldhaber, D. D., and D. J. Brewer. 2000. Does teacher certification matter? High school teacher certification status and student achievement." *Educational Evaluation and Policy Analysis* 22(2): 129–145.

Goldhaber, D. D., and D. J. Brewer. 2001. Evaluating the evidence on teacher certification: A rejoinder. *Educational Evaluation and Policy Analysis* 23(1): 79– 86.

Herbert, K.S. (2004, April). *Production and Retention of Beginning Teachers from 1999 to 2003: A Comparison of Preparation Routes.* State Board for Educator Certification. Retrieved April 29, 2005 from http://www.sbec.state.tx.us/SBECOnline/reprtdatarsrch/tchrattremploy/tchrattremploy.asp

Hess, F. M. 2001. *Tear down this wall: The case for a radical overhaul of teacher certification*. Washington, DC: Progressive Policy Institute.

Ingersoll, R. (2001). *Teacher Turnover, Teacher Shortages, and the Organization of Schools*. Seattle, WA: Center for the Study of Teaching and Policy.

Ingersoll, R. (2003). *Is there really a teacher shortage?.* A research report co-sponsored by Center for the Study of Teaching and Policy and The Consortium for policy Research in Education. Seattle, WA: Center for the Study of Teaching and Policy.

Laczko-Kerr, I., and D. C. Berliner. 2002. The effectiveness of Teach for America and other undercertified teachers on student academic achievement: A case of harmful public policy. *Education Policy Analysis Archives* 10(37): 56.

Neild, R., Useem, E., Travers, E., & Lesnick, J. (2003). *Once and for All: Placing a Highly Qualified Teacher in every Philadelphia Classroom: What we Know and Need to Do.* Philadelphia, PA: Research for Action. Retrieved from http://www.researchforaction.org/

Neild, R., Useem, E., & Farley, E. (2005). *The Quest for Quality: Recruiting and Retaining Teachers in Philadelphia*. Philadelphia, PA: Research for Action. Retrieved from http://www.researchforaction.org/

New York Education Department (2004, October 18). Update on Alternative Teacher Preparation Programs. Retrieved March 30, 2005 from http://www.regents.nysed.gov/ocue/atcregentsreportOct04.htm

New York Education Department (2005, January 14). Update on Alternative Teacher Preparation Programs. March 30, 2005 from http://www.regents.nysed.gov/2005Meetings/February2005/0205heppd1.htm

New York City Council. (2003). *A Staff Report of the New York City Council Investigation Division on Teacher Attrition and Retention*. Retrieved March 30, 2005, from http://www.nyc.gov/html/records/pdf/govpub/1024teachersal.pdf

Plecki, M., A. Elfers, H. Loeb, A. Zahir, & M. Knapp. (2005). A Look Inside and Across Districts and Schools in Washington State. Retrieved April 15, 2005, from http://www.cstp-wa.org/Navigational/Commissionedresearch/Research_reports/Retention/Retention_Report_1.pdf

SBEC [State Board for Educator Certification] (2002). Attrition Rates in Different School Settings for Teachers from Alternative Certification Programs and Traditional University-Based Programs. State Board for Educator Certification. Retrieved April 29, 2005 from http://www.sbec.state.tx.us/SBECOnline/reprtdatarsrch/tchrattremploy/tchrattremploy.asp

Schindler, J., A. Jones, C. Taylor, & H. Cadenas. (2004). *"Don't Smile 'til Christmas": Examining the Immersion of New Teachers into Existing Urban School Climates.* Retrieved April 13, 2005, from http://www.calstatela.edu/centers/schoolclimate/research/immersion_newteachers.html

TEA [Texas Education Agency] (2003). *Texas Teacher Retention, Mobility, and Attrition*. Retrieved April 14, 2005 from http://www.tea.state.texas.us/reserach/pdfs/prr6.pdf

Theobald, N. & M. Michael (2001). *Teacher Turnover in the Midwest: Who Stays, Leaves, and Moves?: Policy Issues*. Naperville, IL: North Central Regional Educational Lab. (ERIC Document Reproduction Service No. ED482905)

Walsh, K. (2001). *Teacher certification reconsidered: Stumbling for quality*. Baltimore, MD: The Abell Foundation.

Wattlington, E., R. Shockley, D. Earley, K. Huie, J. Morris, & M. Lieberman. (2004). Variables Associated with Teacher Retention: A Multi-Year Study. *The Teacher Educator*, 40(1), 56-66. Retrieved from http://hwwilsonweb.com

Williams, D. (2004, September). Teach for America on Hot Seat. Catalyst. Retrieved March 30, 2005, from http://www.catalyst-chicago.org/09-04/0904tfaprint.htm

Table 1: **Types of New Teachers by Cohort Year**

	99-00		00-01		01-02		02-03		03-04	
	n	%	n	%	n	%	n	%	n	%
Certified Regular	224	23.6%	106	10.3%	80	8.9%	101	11.2%	116	22.1%
Teach For Tomorrow (TFT)	0	0.0%	0	0.0%	2	0.2%	3	0.3%	7	1.3%
Provisional (Conditional) Regular	629	66.2%	738	71.8%	632	70.6%	537	59.3%	116	22.1%
Resident Teacher (RT)	36	3.8%	20	1.9%	2	0.2%	34	3.8%	86*	16.4%
Project Site Support (PSS)	21	2.2%	108	10.5%	130	14.5%	128	14.1%	133	25.4%
Teach For America (TFA)	35	3.7%	11	1.1%	49	5.5%	102	11.3%	66	12.6%
PSS and TFA	5	0.5%	45	4.4%	0	0.0%	0	0.0%	0	0.0%
TOTAL	950	100.0%	1028	100.0%	895	100.0%	905	100.0%	524	100.0%

	99-00	00-01	01-02	02-03	03-04
Non-teaching staff (excluded)	79	68	70	60	NA
# teachers leaving prior to June	108	124	97	83	45
Net teachers hired	842	904	798	822	479

* Includes 1 teacher co-enrolled in PSS

Table 2: **New Female Teachers by Cohort**

	99-00		00-01		01-02		02-03		03-04	
	n	%	n	%	n	%	n	%	n	%
Total	677	71.3%	719	69.9%	650	72.6%	605	66.9%	359	68.5%
Certified Regular	174	77.7%	83	78.3%	64	80.0%	76	75.2%	85	73.3%
Teach For Tomorrow (TFT)	N/A	N/A	N/A	N/A	2	100.0%	2	66.7%	6	85.7%
Provisional	437	69.5%	510	69.1%	445	70.4%	343	63.9%	69	59.5%
Alternative Certification	66	68.0%	126	68.5%	139	76.8%	184	69.7%	199	69.8%
Resident Teacher (RT)	20	55.6%	11	55.0%	1	50.0%	23	67.6%	57*	67.1%
Project Site Support (PSS)	18	85.7%	75	69.4%	104	80.0%	96	75.0%	90	67.7%
Teach For America (TFA)	25	71.4%	7	63.6%	34	69.4%	65	63.7%	51	77.3%
PSS and TFA	3	60.0%	33	73.3%	N/A	N/A	N/A	N/A	N/A	N/A
PSS & RT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	100.0%

* includes those in the Teacher Residency program and resident teachers in no program

Table 3: Racial Identity of New Teachers

(values are row percentages)

	99-00			00-01			01-02			02-03			03-04		
	Afr-Amer	White	Other	Afr-Amer	White	Other	Afr-Amer	White	Other	Afr-Amer	White	Other	Afr-Amer	White	Other
Total	49.2%	48.0%	2.8%	61.1%	36.8%	2.1%	55.5%	40.0%	4.5%	47.3%	48.6%	4.1%	41.2%	54.2%	4.6%
Certified Regular	25.9%	72.8%	1.3%	37.7%	60.4%	1.9%	32.5%	66.3%	1.3%	24.8%	70.3%	5.0%	29.3%	69.0%	1.7%
Teach For Tomorrow (TFT)	N/A	N/A	N/A	N/A	N/A	N/A	50.0%	50.0%	0.0%	0.0%	100.0%	0.0%	28.6%	57.1%	14.3%
Provisional	61.0%	36.2%	2.7%	68.0%	30.2%	1.8%	59.5%	35.3%	5.2%	59.0%	38.0%	3.0%	56.0%	42.2%	1.7%
Alternative Certification	25.8%	67.0%	7.2%	46.7%	49.5%	3.8%	51.9%	44.8%	3.3%	32.6%	61.4%	6.1%	40.4%	53.0%	6.7%
Resident Teacher (RT)	19.4%	75.0%	5.6%	25.0%	75.0%	0.0%	50.0%	50.0%	0.0%	35.3%	61.8%	2.9%	37.6%	58.8%	3.5%
Project Site Support (PSS)	52.4%	42.9%	4.8%	67.6%	30.6%	1.9%	65.4%	32.3%	2.3%	50.0%	46.9%	3.1%	56.4%	36.8%	6.8%
Teach For America (TFA)	11.4%	77.1%	11.4%	0.0%	63.6%	36.4%	16.3%	77.6%	6.1%	9.8%	79.4%	10.8%	10.6%	78.8%	10.6%
PSS and TFA	60.0%	40.0%	0.0%	17.8%	80.0%	2.2%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PSS & RT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100.0%	0.0%	0.0%

* includes those in the Teacher Residency program and resident teachers in no program

Table 4: **New Teachers From Maryland Colleges**

	99-00		00-01		01-02		02-03		03-04	
	n	%	n	%	n	%	n	%	n	%
Total	436	45.9%	398	38.7%	216	24.1%	341	37.7%	150	28.6%
Certified Regular	109	48.7%	43	40.6%	13	16.3%	40	39.6%	30	25.9%
Teach For Tomorrow (TFT)	N/A	N/A	N/A	N/A	1	50.0%	1	33.3%	1	14.3%
Provisional	301	47.9%	308	41.7%	164	25.9%	214	39.9%	42	36.2%
Alternative Certification	26	26.8%	47	25.5%	38	21.0%	86	32.6%	77	27.0%
Resident Teacher* (RT)	17	47.2%	6	30.0%	0	0.0%	13	38.2%	20*	23.5%
Project Site Support (PSS)	8	38.1%	39	36.1%	33	25.4%	70	54.7%	54	40.6%
Teach For America (TFA)	0	0.0%	1	2.2%	0	0.0%	0	0.0%	0	0.0%
PSS and TFA	1	2.9%	1	9.1%	5	10.2%	3	2.9%	2	3.0%
RT & PSS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	100.0%

* includes those in the Teacher Residency program and resident teachers in no program

Reported percentages probably underestimate actual figures, since large percentages of cases have missing data on college attended (not excluded here)

Table 5: **Average Years of Prior Experience for New Teachers by Cohort Year**

	99-00		00-01		01-02		02-03		03-04	
	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range
Total	1.17	0-32	0.73	0-33	0.94	0-23	0.86	0-22	1.27	0-30
Certified	2.36	0-32	2.54	0-30	2.40	0-20	3.15	0-20	3.12	0-30
Teach For Tomorrow (TFT)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.29	0-2
Provisional	0.90	0-25	0.64	0-33	0.96	0-23	0.80	0-22	2.27	0-28
Alternative Certification	0.21	0-7	0.03	0-3	0.24	0-8	0.10	0-8	0.13	0-10
Resident Teacher* (RT)	0.25	0-7	0.05	0-1	0.00	0-0	0.24	0-8	0.18	0-8
Project Site Support (PSS)	0.52	0-5	0.05	0-3	0.33	0-8	0.13	0-8	0.17	0-10
Teach For America (TFA)	0.00	0-0	0.00	0-0	0.00	0-0	1.00	0-3	0.00	0-0
PSS and TFA	0.00	0-0	0.00	0-0	0.02	0-1	0.02	0-2	N/A	N/A
RT & PSS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	0-0

* includes those in the Teacher Residency program and resident teachers in no program

Table 6: New Teachers entering with Master's Degrees or Higher

(excludes cases with missing data)

	99-00		00-01		01-02		02-03		03-04	
	n	%	n	%	n	%	n	%	n	%
Total	149	15.8%	120	11.7%	88	9.8%	161	19.0%	73	16.9%
Certified Regular	54	24.2%	30	28.3%	15	18.3%	35	36.8%	27	30.0%
Teach For Tomorrow (TFT)	N/A	N/A	N/A	N/A	0	0.0%	0	0.0%	1	100.0%
Provisional	87	13.9%	79	10.8%	67	10.6%	95	19.4%	20	22.0%
Alternative Certification	8	8.2%	11	6.0%	6	3.3%	31	11.7%	26	10.6%
Resident Teacher* (RT)	8	22.2%	4	20.0%	0	0.0%	7	21.2%	18*	30.0%
Project Site Support (PSS)	0	0.0%	6	5.6%	5	6.1%	20	16.1%	7	5.9%
Teach For America (TFA)	0	0.0%	0	0.0%	1	2.0%	4	4.0%	1	1.5%
PSS and TFA	0	0.0%	1	2.2%	0	0.0%	0	0.0%	0	0.0%
RT & PSS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0.0%

* includes those in the Teacher Residency program and resident teachers in no program

Missing data:

99-00 4 missing cases
00-01 5 missing cases
01-02 255 missing cases
02-03 59 missing cases
03-04 93 missing cases

Table 7: Undergraduate Degree Institutions by Category

(values are column percentages; missing values are included in Other/Unknown)

	99-00			00-01			01-02			02-03			03-04		
	Certified	Provisional	Alt. Cert	Certified	Provisional	Alt. Cert	Certified	Provisional	Alt. Cert	Certified	Provisional	Alt. Cert	Certified	Provisional	Alt. Cert
Other/Unknown	5.4%	11.3%	1.0%	29.2%	27.8%	27.7%	59.8%	55.1%	46.4%	13.5%	22.9%	6.4%	24.4%	21.6%	5.3%
Morgan State Univ.	5.4%	10.3%	2.1%	1.9%	7.6%	3.3%	2.4%	5.2%	1.7%	1.0%	10.1%	4.9%	2.4%	9.5%	7.4%
Coppin State Univ.	7.1%	12.2%	4.1%	5.7%	11.9%	4.9%	1.2%	7.9%	3.9%	3.8%	6.9%	4.9%	1.6%	5.2%	1.8%
Towson State Univ.	13.8%	8.1%	5.2%	13.2%	6.5%	2.7%	7.3%	4.3%	2.8%	14.4%	7.8%	4.2%	6.5%	5.2%	3.5%
Univ. of Maryland	4.9%	6.7%	7.2%	1.9%	5.1%	5.4%	2.4%	4.0%	3.9%	3.8%	5.8%	8.0%	4.9%	8.6%	5.6%
Loyola Coll.	5.4%	1.4%	1.0%	4.7%	0.7%	0.0%	1.2%	0.2%	0.6%	1.9%	1.1%	0.4%	2.4%	0.0%	2.8%
Other MD Coll.	9.4%	7.0%	4.1%	8.5%	7.6%	6.5%	2.4%	3.6%	5.0%	14.4%	6.7%	5.7%	4.9%	4.3%	3.5%
Johns Hopkins Univ.	1.8%	1.4%	1.0%	3.8%	1.5%	1.6%	0.0%	0.6%	1.1%	0.0%	1.1%	4.2%	1.6%	1.7%	1.7%
Maryland Institute College of Art	0.4%	0.6%	0.0%	0.9%	0.5%	0.0%	0.0%	0.2%	0.6%	0.0%	0.4%	0.4%	0.8%	1.7%	0.7%
Other Selective Coll./Univ.	1.8%	3.3%	24.7%	2.8%	2.7%	17.9%	0.0%	2.2%	9.4%	2.9%	3.5%	17.4%	6.5%	4.3%	12.3%
Non-MD State Coll./Univ.	11.6%	12.9%	21.6%	10.4%	8.9%	16.3%	4.9%	7.3%	11.6%	16.3%	15.3%	21.6%	26.0%	12.9%	24.2%
Non-MD Private Coll./Univ.	32.1%	23.8%	25.8%	16.0%	17.3%	12.5%	18.3%	8.4%	11.6%	26.9%	17.9%	20.5%	17.1%	24.1%	30.9%
Technical/Community Coll.	0.9%	0.8%	2.1%	0.9%	1.8%	1.1%	0.0%	1.1%	1.7%	1.0%	0.6%	1.5%	0.8%	0.9%	0.4%

	99-00			00-01			01-02			02-03			03-04		
	RT	PSS	TFA	RT	PSS	TFA	RT	PSS	TFA	RT	PSS	TFA	RT*	PSS	TFA
Other/Unknown	0.0%	4.8%	0.0%	35.0%	40.7%	0.0%	50.0%	63.1%	2.0%	14.7%	9.4%	0.0%	0.0%	11.3%	0.0%
Morgan State Univ.	0.0%	9.5%	0.0%	0.0%	5.6%	0.0%	0.0%	2.3%	0.0%	17.6%	5.5%	0.0%	1.2%	14.3%	0.0%
Coppin State Univ.	5.6%	9.5%	0.0%	0.0%	8.3%	0.0%	0.0%	5.4%	0.0%	0.0%	10.2%	0.0%	1.2%	3.0%	0.0%
Towson State Univ.	8.3%	9.5%	0.0%	5.0%	3.7%	0.0%	0.0%	3.1%	2.0%	5.9%	7.0%	0.0%	4.7%	4.5%	0.0%
Univ. of Maryland	16.7%	0.0%	2.9%	15.0%	5.6%	9.1%	0.0%	2.3%	8.2%	5.9%	14.8%	0.0%	7.1%	6.8%	1.5%
Loyola Coll.	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	1.0%	5.9%	1.5%	1.5%
Other MD Coll.	5.6%	9.5%	0.0%	5.0%	10.2%	0.0%	0.0%	6.9%	0.0%	2.9%	9.4%	2.0%	2.4%	6.0%	0.0%
Johns Hopkins Univ.	2.8%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%	1.5%	0.0%	2.9%	7.8%	0.0%	1.2%	3.0%	0.0%
Maryland Institute College of Art	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	2.9%	0.0%	0.0%	0.0%	1.5%	0.0%
Other Selective Coll./Univ.	22.2%	14.3%	34.3%	5.0%	3.7%	63.6%	0.0%	0.8%	32.7%	5.9%	3.1%	39.2%	8.2%	3.8%	34.8%
Non-MD State Coll./Univ.	11.1%	23.8%	28.6%	30.0%	9.3%	18.2%	50.0%	3.8%	30.6%	23.5%	14.1%	30.4%	27.1%	18.0%	33.3%
Non-MD Private Coll./Univ.	19.4%	19.0%	34.3%	0.0%	10.2%	9.1%	0.0%	6.9%	24.5%	17.6%	15.6%	27.5%	40.0%	26.3%	28.8%
Technical/Community Coll.	5.6%	0.0%	0.0%	5.0%	0.9%	0.0%	0.0%	2.3%	0.0%	0.0%	3.1%	0.0%	1.2%	0.0%	0.0%

NOTE: Johns Hopkins University and Maryland Institute College of Art are highly selective institutions

* includes those in the Teacher Residency program and resident teachers in no program

Table 8: Placement of New Teachers by School Type

(values are column percentages)

	99-00			00-01			01-02			02-03			03-04		
	Certified	Provisional	Alt. Cert	Certified	Provisional	Alt. Cert	Certified	Provisional	Alt. Cert	Certified	Provisional	Alt. Cert	Certified	Provisional	Alt. Cert
ELEMENTARY	48.4%	34.1%	25.0%	50.6%	42.6%	39.8%	59.4%	38.1%	47.8%	47.2%	31.3%	35.0%	33.3%	26.1%	34.0%
ELEMENTARY/MIDDLE	19.6%	14.6%	17.0%	14.9%	13.5%	15.1%	21.9%	17.7%	13.4%	19.1%	19.4%	19.2%	19.5%	11.3%	16.8%
MIDDLE	13.1%	24.1%	19.3%	12.6%	23.2%	22.3%	6.3%	19.7%	21.7%	5.6%	18.4%	19.6%	12.2%	17.4%	18.9%
COMPREHENSIVE HS	7.2%	14.8%	21.6%	5.7%	9.7%	13.9%	1.6%	9.2%	7.0%	11.2%	12.9%	10.8%	5.7%	10.4%	9.5%
VOCATIONAL HS	0.0%	2.3%	3.4%	2.3%	2.0%	1.2%	1.6%	2.5%	0.0%	2.2%	1.5%	3.5%	0.8%	4.3%	3.9%
CITYWIDE HS	5.2%	3.2%	4.5%	8.0%	4.3%	4.8%	3.1%	4.5%	3.8%	4.5%	3.2%	2.3%	7.3%	8.7%	3.2%
INNOVATIVE HS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	7.3%	5.4%	10.6%	10.4%	9.1%
ALTERNATIVE HS	2.0%	2.6%	0.0%	1.1%	0.7%	0.6%	1.6%	3.8%	0.0%	1.1%	1.9%	0.8%	1.6%	3.5%	1.4%
SPECIAL ED SCHOOL	1.3%	3.2%	0.0%	0.0%	1.7%	0.0%	0.0%	2.0%	0.0%	2.2%	1.0%	0.0%	4.1%	5.2%	0.4%
NEW SCHOOL INITIATIVE	3.3%	0.9%	9.1%	4.6%	2.4%	2.4%	4.7%	2.5%	6.4%	1.1%	3.2%	3.5%	4.9%	2.6%	2.8%
	n=	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*
	153	*431*	*88*	*87*	*587*	*166*	*64*	*446*	*157*	*89*	*412*	*260*	*123*	*115*	*285*

BCPSS assigned another code besides school number to all teachers who ended their employment, so these percentages were calculated excluding roughly 200 or more teachers in the first three cohorts, and over 100 teachers in the fourth cohort.

Table 9: Placement of New Teachers by School Type (Including Title 1 Status)

(values are column percentages)

	99-00			00-01			01-02			02-03			03-04		
	Certified	Provisional	Alt. Cert	Certified	Provisional	Alt. Cert	Certified	Provisional	Alt. Cert	Certified	Provisional	Alt. Cert	Certified	Provisional	Alt. Cert
TITLE 1 ELEMENTARY	20.3%	18.8%	9.1%	25.3%	21.6%	25.3%	25.0%	17.5%	20.4%	21.3%	18.0%	17.7%	14.6%	8.7%	16.8%
TITLE I ELEMENTARY/MIDDLE	3.9%	4.6%	5.7%	8.0%	6.8%	6.6%	0.0%	4.0%	3.8%	7.9%	8.0%	10.4%	6.5%	4.3%	8.4%
TITLE 1 MIDDLE	5.2%	4.9%	3.4%	1.1%	6.3%	9.6%	3.1%	7.0%	5.7%	2.2%	5.8%	6.9%	4.1%	3.5%	5.3%
OTHER ELEMENTARY	28.1%	15.3%	15.9%	25.3%	21.0%	14.5%	34.4%	20.6%	27.4%	25.8%	13.3%	17.3%	18.7%	17.4%	17.2%
OTHER ELEMENTARY/MIDDLE	15.7%	10.0%	11.4%	6.9%	6.6%	8.4%	21.9%	13.7%	9.6%	11.2%	11.4%	8.8%	13.0%	7.0%	8.4%
OTHER MIDDLE	7.8%	19.3%	15.9%	11.5%	16.9%	12.7%	3.1%	12.8%	15.9%	3.4%	12.6%	12.7%	8.1%	13.9%	13.7%
COMPREHENSIVE HS	7.2%	14.8%	21.6%	5.7%	9.7%	13.9%	1.6%	9.2%	7.0%	11.2%	12.9%	10.8%	5.7%	10.4%	9.5%
VOCATIONAL HS	0.0%	2.3%	3.4%	2.3%	2.0%	1.2%	1.6%	2.5%	0.0%	2.2%	1.5%	3.5%	0.8%	4.3%	3.9%
CITYWIDE HS	5.2%	3.2%	4.5%	8.0%	4.3%	4.8%	3.1%	4.5%	3.8%	4.5%	3.2%	2.3%	7.3%	8.7%	3.2%
INNOVATIVE HS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	7.3%	5.4%	10.6%	10.4%	9.1%
ALTERNATIVE HS	2.0%	2.6%	0.0%	1.1%	0.7%	0.6%	1.6%	3.8%	0.0%	1.1%	1.9%	0.8%	1.6%	3.5%	1.4%
SPECIAL ED SCHOOL	1.3%	3.2%	0.0%	0.0%	1.7%	0.0%	0.0%	2.0%	0.0%	2.2%	1.0%	0.0%	4.1%	5.2%	0.4%
NEW SCHOOL INITIATIVE	3.3%	0.9%	9.1%	4.6%	2.4%	2.4%	4.7%	2.5%	6.4%	1.1%	3.2%	3.5%	4.9%	2.6%	2.8%
	n=	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*	*n=*
	153	*431*	*88*	*87*	*587*	*166*	*64*	*446*	*157*	*89*	*412*	*260*	*123*	*115*	*285*

Table 10: A. Distribution of New Math Teachers

	99-00	00-01	01-02	02-03	03-04**
Total	53	50	46	58	43
Certified	6	2	1	6	10
Provisional	43	38	35	33	8
Alternative Certification	4	10	10	19	25
Resident Teacher* (RT)	1	1	0	1	13
Project Site Support (PSS)	0	4	7	11	11
Teach For America (TFA)	2	0	3	7	1
PSS and TFA	1	5	0	0	0
RT & PSS	0	0	0	0	0

* includes those in the Teacher Residency program and resident teachers in no program

** there are 30 cases in the 03-04 cohort data for which "subject taught" was missing

B. Educational Background of New Math Teachers

	99-00	00-01	01-02	02-03	03-04**
Total	53	50	46	58	43
Math Major/Minor	2	4	1	5	11
Certified	*NA*	*NA*	*NA*	*NA*	*4*
Provisional	*NA*	*NA*	*NA*	*NA*	*2*
Alt. Cert.	*2*	*4*	*1*	*5*	*5*
Other Major/Minor	1	1	2	2	16
No data	50	45	43	51	16

******* Data on undergraduate major only available for TFA prior to 2003/2004

Table 11: A. Distribution of New Science Teachers

	99-00	00-01	01-02	02-03	03-04**
Total	49	52	46	53	38
Certified	4	2	0	5	8
Provisional	36	31	28	24	7
Alternative Certification	9	19	18	24	23
Resident Teacher* (RT)	4	3	0	3	5
Project Site Support (PSS)	0	5	7	8	11
Teach For America (TFA)	4	1	11	13	7
PSS and TFA	1	10	0	0	0
RT & PSS	0	0	0	0	0

* includes those in the Teacher Residency program and resident teachers in no program

** there are 30 cases in the 03-04 cohort data for which "subject taught" was missing

B. Educational Background of New Science Teachers

	99-00	00-01	01-02	02-03	03-04**
Total	49	52	46	53	38
Science Major/Minor	5	11	9	11	23
Certified	*NA*	*NA*	*NA*	*NA*	*5*
Provisional	*NA*	*NA*	*NA*	*NA*	*4*
Alt. Cert.	*5*	*11*	*9*	*11*	*14*
Other Major/Minor	0	0	2	2	9
No data	44	41	35	40	6

******* Data on undergraduate major only available for TFA prior to 2003/2004

Table 12: A. Distribution of New Spanish Teachers

	99-00	00-01	01-02	02-03	03-04**
Total	12	8	10	20	18
Certified	0	1	0	0	1
Provisional	6	6	7	10	1
Alternative Certification	6	1	3	10	16
Resident Teacher* (RT)	3	0	0	2	1
Project Site Support (PSS)	0	0	1	2	2
Teach For America (TFA)	3	0	2	6	13
PSS and TFA	0	1	0	0	0
RT & PSS	0	0	0	0	0

* includes those in the Teacher Residency program and resident teachers in no program

** there are 30 cases in the 03-04 cohort data for which "subject taught" was missing

B. Educational Background of New Spanish Teachers

	99-00	00-01	01-02	02-03	03-04**
Total	12	8	10	20	18
Spanish Major/Minor	3	1	1	5	14
Certified	*NA*	*NA*	*NA*	*NA*	*0*
Provisional	*NA*	*NA*	*NA*	*NA*	*0*
Alt. Cert.	*3*	*1*	*1*	*5*	*14*
Other Major/Minor	0	0	0	1	3
No data	9	7	9	14	1

******* Data on undergraduate major only available for TFA prior to 2003/2004

Table 13: A. Distribution of New Special Education Teachers

	99-00	00-01	01-02	02-03	03-04**
Total	124	99	110	84	42
Certified	22	4	6	6	13
Provisional	102	94	100	74	18
Alternative Certification	0	1	4	4	11
Resident Teacher* (RT)	0	0	0	4	1
Project Site Support (PSS)	0	1	4	0	7
Teach For America (TFA)	0	0	0	0	3
PSS and TFA	0	0	0	0	0
RT & PSS	0	0	0	0	0

* includes those in the Teacher Residency program and resident teachers in no program

** there are 30 cases in the 03-04 cohort data for which "subject taught" was missing

B. Educational Background of New Special Education Teachers

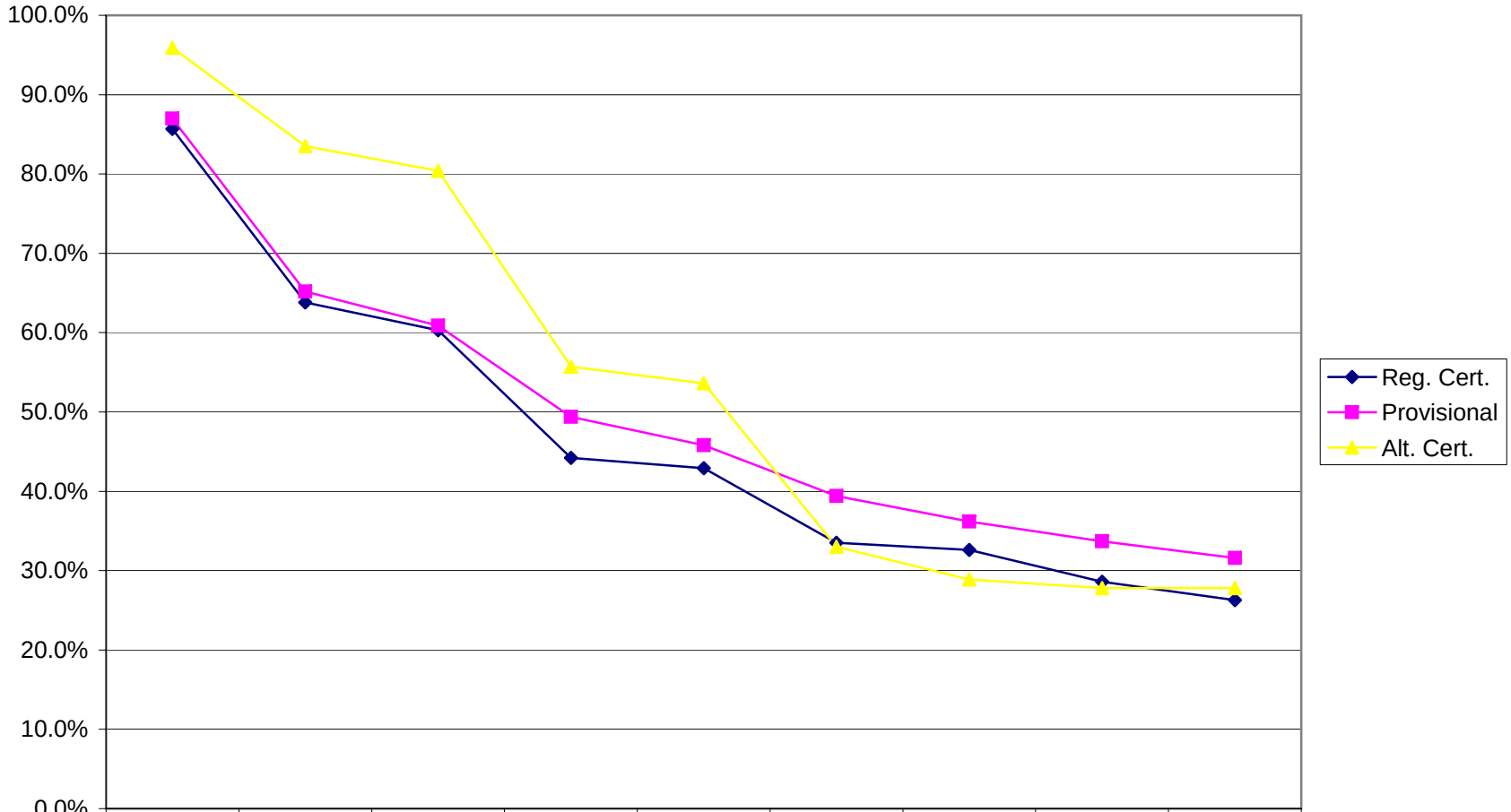
	99-00	00-01	01-02	02-03	03-04**
Total	124	99	110	84	42
Special Ed Major/Minor	*(no data)*	*(no data)*	*(no data)*	*(no data)*	6
Certified	*(no data)*	*(no data)*	*(no data)*	*(no data)*	*3*
Provisional	*(no data)*	*(no data)*	*(no data)*	*(no data)*	*3*
Alt. Cert.	*(no data)*	*(no data)*	*(no data)*	*(no data)*	*0*
Education Major/Minor	*(no data)*	*(no data)*	*(no data)*	*(no data)*	7
Certified	*(no data)*	*(no data)*	*(no data)*	*(no data)*	*4*
Provisional	*(no data)*	*(no data)*	*(no data)*	*(no data)*	*3*
Alt. Cert.	*(no data)*	*(no data)*	*(no data)*	*(no data)*	*0*
Other Major/Minor	*(no data)*	*(no data)*	*(no data)*	*(no data)*	17
No data	124	99	110	84	12

******* Data on undergraduate major only available for TFA prior to 2003/2004

TABLE 14: **New Teacher Retention Summary by Cohort and Certification Group**

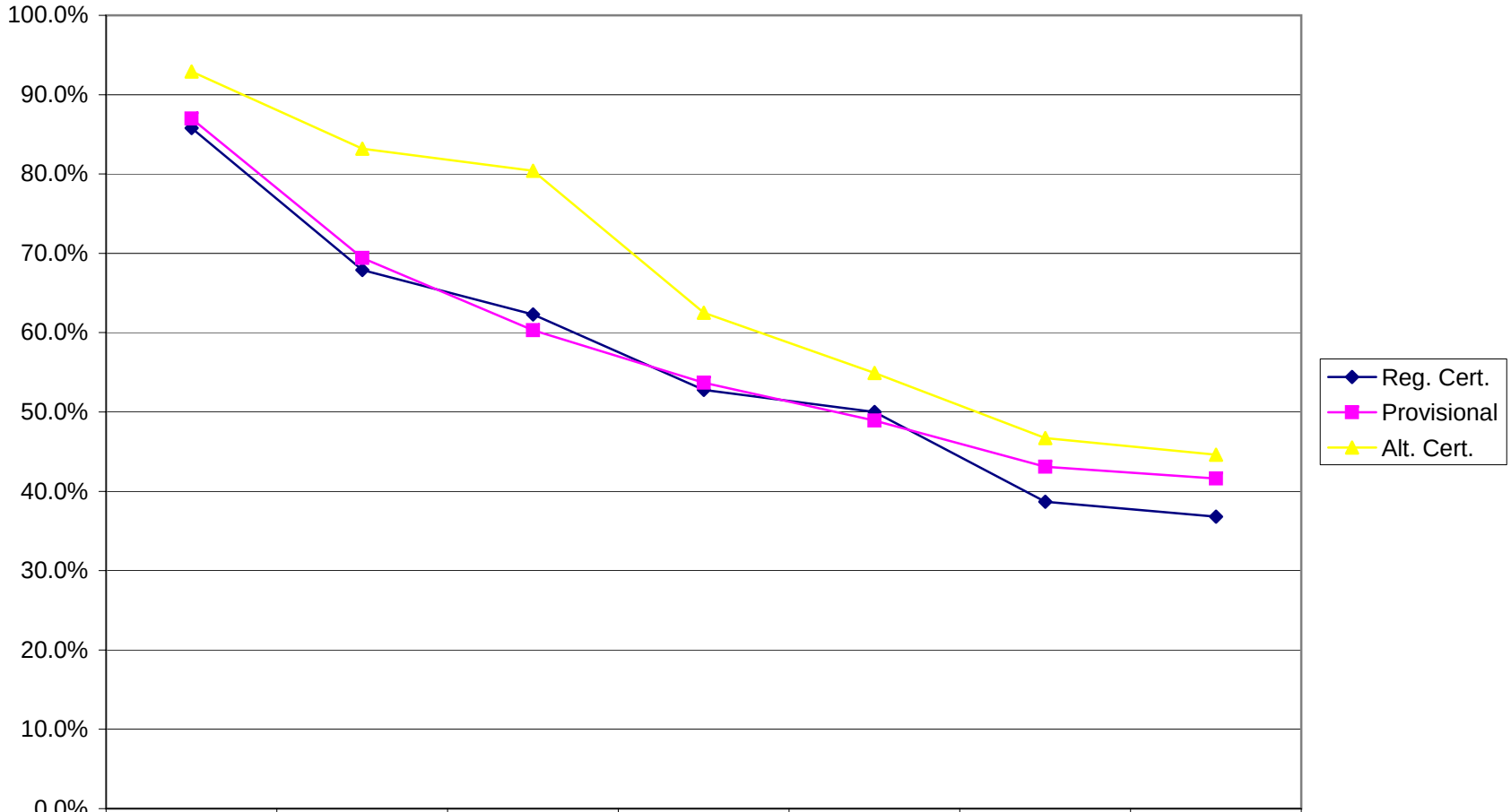
	99-00 Cohort			00-01 Cohort			01-02 Cohort			02-03 Cohort			03-04 Cohort		
	Certified	Provisional	Alternative Programs	Certified	Provisional	Alternative Programs	Certified	Provisional	Alternative Programs	Certified	Provisional	Alternative Programs	Certified	Provisional	Alternative Programs
End Yr1	85.7%	87.0%	95.9%	85.8%	87.0%	92.9%	84.1%	75.6%	91.7%	88.5%	77.3%	87.5%	97.6%	79.3%	93.7%
Beg. Yr2	63.8%	65.2%	83.5%	67.9%	69.4%	83.2%	74.4%	66.3%	84.5%	66.3%	68.2%	84.1%			
End Yr2	60.3%	60.9%	80.4%	62.3%	60.3%	80.4%	69.5%	57.4%	77.3%	62.5%	60.1%	81.8%			
Beg. Yr3	44.2%	49.4%	55.7%	52.8%	53.7%	62.5%	53.7%	52.7%	66.3%						
End Yr3	42.9%	45.8%	53.6%	50.0%	48.9%	54.9%	51.2%	50.3%	61.3%						
Beg Yr4	33.5%	39.4%	33.0%	38.7%	43.1%	46.7%									
End Yr4	32.6%	36.2%	28.9%	36.8%	41.6%	44.6%									
Beg. Yr5	28.6%	33.7%	27.8%												
End Yr5	26.3%	31.6%	27.8%												

Figure 3: Chart of 1999-2000 Cohort Retention



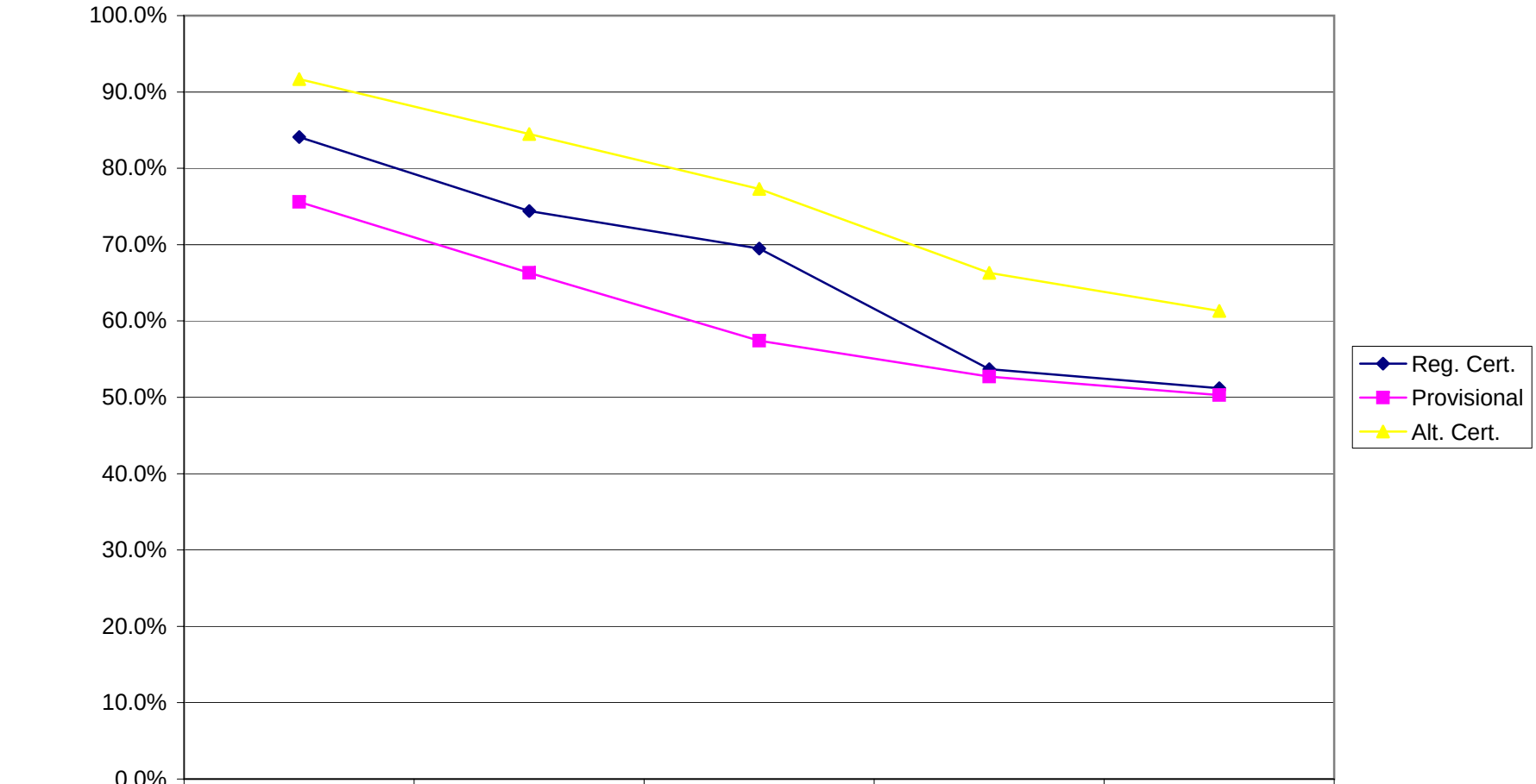
	End Yr1	Beg. Yr2	End Yr2	Beg. Yr3	End Yr3	Beg Yr4	End Yr4	Beg. Yr5	End Yr5
Reg. Cert.	85.7%	63.8%	60.3%	44.2%	42.9%	33.5%	32.6%	28.6%	26.3%
Provisional	87.0%	65.2%	60.9%	49.4%	45.8%	39.4%	36.2%	33.7%	31.6%
Alt. Cert.	95.9%	83.5%	80.4%	55.7%	53.6%	33.0%	28.9%	27.8%	27.8%

Figure 4: Chart of 2000-2001 Cohort Retention



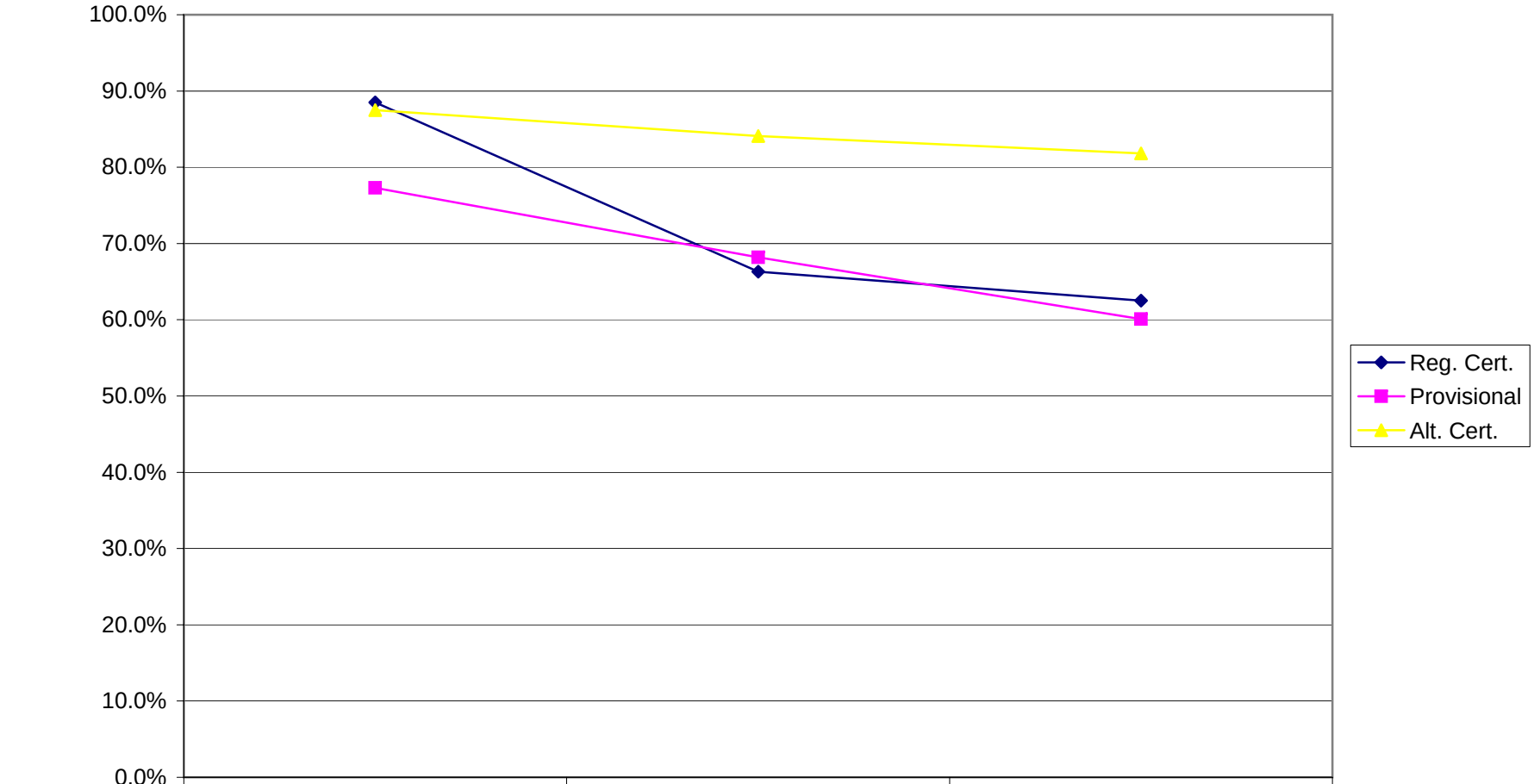
	End Yr1	Beg. Yr2	End Yr2	Beg. Yr3	End Yr3	Beg Yr4	End Yr4
Reg. Cert.	85.8%	67.9%	62.3%	52.8%	50.0%	38.7%	36.8%
Provisional	87.0%	69.4%	60.3%	53.7%	48.9%	43.1%	41.6%
Alt. Cert.	92.9%	83.2%	80.4%	62.5%	54.9%	46.7%	44.6%

Figure 5: Chart of 2001-2002 Cohort Retention



	End Yr1	Beg. Yr2	End Yr2	Beg. Yr3	End Yr3
Reg. Cert.	84.1%	74.4%	69.5%	53.7%	51.2%
Provisional	75.6%	66.3%	57.4%	52.7%	50.3%
Alt. Cert.	91.7%	84.5%	77.3%	66.3%	61.3%

Figure 6: Chart of 2002-2003 Cohort Retention



	End Yr1	Beg. Yr2	End Yr2
Reg. Cert.	88.5%	66.3%	62.5%
Provisional	77.3%	68.2%	60.1%
Alt. Cert.	87.5%	84.1%	81.8%

Table 15: Alternative Certification Retention - Detailed Summary

99-00 Cohort

	Beg. Year 1	End of Year 1	Beg. Year 2	End of Year 2	Beg. Year 3	End of Year 3	Beg. Year 4	End of Year 4	Beg. Year 5	End of Year 5
Resident Teacher	36	32	22	20	19	17	15	12	10	10
PSS - JHU	0	0	0	0	0	0	0	0	0	0
PSS - Morgan	0	0	0	0	0	0	0	0	0	0
PSS - UMBC	21	21	20	19	15	15	11	11	13	13
PSS and TFA (JHU)	5	5	4	4	4	4	2	2	2	2
TFA	35	35	35	35	16	16	4	3	2	2

00-01 Cohort

	Beg. Year 1	End of Year 1	Beg. Year 2	End of Year 2	Beg. Year 3	End of Year 3	Beg. Year 4	End of Year 4
Resident Teacher	20	17	13	11	12	11	8	8
PSS - JHU	39	33	25	25	21	17	18	18
PSS - Morgan	18	17	17	16	13	12	11	10
PSS - UMBC	51	48	42	41	37	36	31	28
PSS and TFA (JHU)	45	45	45	44	30	25	18	18
TFA	11	11	11	11	2	0	0	0

01-02 Cohort

	Beg. Year 1	End of Year 1	Beg. Year 2	End of Year 2	Beg. Year 3	End of Year 3
Resident Teacher	2	0	0	0	0	0
PSS - JHU	63	52	52	47	45	40
PSS - Morgan	7	6	5	5	4	4
PSS - UMBC	60	59	51	46	45	43
TFA	49	49	45	42	26	24

02-03 Cohort

	Beg. Year 1	End of Year 1	Beg. Year 2	End of Year 2
Resident Teacher	34	34	31	31
PSS - JHU	77	71	69	66
PSS - Morgan	6	5	5	5
PSS - UMBC	45	37	36	35
TFA	102	84	81	79

03-04 Cohort

	Beg. Year 1	End of Year 1
Resident Teacher	85	80
PSS - JHU	70	67
PSS - Morgan	31	29
PSS - UMBC	32	29
TFA	66	61
TR & PSS	1	1

Table 16: **1999-2000 Cohort Teachers who Progressed to Full Certification and Remained with BCPSS (Cumulative)**

	Total w/o Full Cert. at hire	00-01		01-02		02-03		03-04	
		n	%	n	%	n	%	n	%
Total	721	39	5.4%	92	12.8%	78	10.8%	86	11.9%
Provisional	629	39	6.2%	55	8.7%	59	9.4%	68	10.8%
Alternative Certification	92	0	0.0%	37	40.2%	19	20.7%	18	19.6%
Resident Teacher* (RT)	36	0	0.0%	14	38.9%	10	27.8%	8	22.2%
Project Site Support (PSS)	17	0	0.0%	6	35.3%	4	23.5%	7	41.2%
Teach For America (TFA)	34	0	0.0%	13	38.2%	3	8.8%	1	2.9%
PSS and TFA	5	0	0.0%	4	80.0%	2	40.0%	2	40.0%
RT & PSS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

n= number in system who progressed (cumulative, after attrition) % denominator: number in initial cohort w/o full cert. at hire

* includes those in the Teacher Residency program and resident teachers in no program

Table 17: **2000-01 Cohort Teachers who Progressed to Full Certification and Remained with BCPSS (Cumulative)**

	Total w/o Full Cert. at hire	01-02		02-03		03-04	
		n	%	n	%	n	%
Total	918	61	6.6%	109	11.9%	255	27.8%
Provisional	738	53	7.2%	63	8.5%	205	27.8%
Alternative Certification	180	8	4.4%	46	25.6%	50	27.8%
Resident Teacher* (RT)	20	2	10.0%	7	35.0%	4	20.0%
Project Site Support (PSS)	104	5	4.8%	20	19.2%	35	33.7%
Teach For America (TFA)	11	0	0.0%	0	0.0%	N/A	N/A
PSS and TFA	45	1	2.2%	19	42.2%	11	24.4%
RT & PSS	N/A	N/A	N/A	N/A	N/A	N/A	N/A

n= number in system who progressed (cumulative, after attrition) % denominator: number in initial cohort w/o full cert. at hire

* includes those in the Teacher Residency program and resident teachers in no program

Table 18: **2001-02 Cohort Teachers who Progressed to Full Certification and Remained with BCPSS (Cumulative)**

	Total w/o Full Cert. at hire	02-03		03-04	
		n	%	n	%
Total	808	47	5.8%	141	17.5%
Provisional	632	45	7.1%	81	12.8%
Alternative Certification	176	2	1.1%	60	34.1%
Resident Teacher* (RT)	2	N/A	N/A	N/A	N/A
Project Site Support (PSS)	127	1	0.8%	42	33.1%
Teach For America (TFA)	47	1	2.1%	18	38.3%
PSS and TFA	N/A	N/A	N/A	N/A	N/A
RT & PSS	N/A	N/A	N/A	N/A	N/A

n= number in system who progressed (cumulative, after attrition) % denominator: number in initial cohort w/o full cert at hire

* includes those in the Teacher Residency program and resident teachers in no program

Table 19: **2002-03 Cohort Teachers who Progressed to Full Certification and Remained with BCPSS (Cumulative)**

	Total w/o Full Cert. at hire	03-04	
		n	%
Total	798	175	21.9%
Provisional	537	87	16.2%
Alternative Certification	261	88	33.7%
Resident Teacher* (RT)	34	13	38.2%
Project Site Support (PSS)	126	30	23.8%
Teach For America (TFA)	101	44	43.6%
PSS and TFA	N/A	N/A	N/A
RT & PSS	N/A	N/A	N/A

n= number in system who progressed (cumulative, after attrition) % denominator: number in initial cohort w/o full cert. at hire

* includes those in the Teacher Residency program and resident teachers in no program

Table 20: **1999-2000 Cohort Teachers who Progressed to Master's Degree and Remained with BCPSS (Cumulative)**

	Total w/o Master's at hire	00-01		01-02		02-03		03-04	
		n	%	n	%	n	%	n	%
Total	797	6	0.8%	32	4.0%	38	4.8%	49	6.1%
Certified	169	1	0.6%	2	1.2%	4	2.4%	6	3.6%
Provisional	539	2	0.4%	6	1.1%	22	4.1%	31	5.8%
Alternative Certification	89	3	3.4%	24	27.0%	12	13.5%	12	13.5%
Resident Teacher* (RT)	28	0	0.0%	0	0.0%	0	0.0%	1	3.6%
Project Site Support (PSS)	21	3	14.3%	8	38.1%	7	33.3%	8	38.1%
Teach For America (TFA)	35	0	0.0%	13	37.1%	3	8.6%	2	5.7%
PSS and TFA	5	0	0.0%	3	60.0%	2	40.0%	1	20.0%
RT & PSS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

n= number in system who progressed (cumulative, after attrition) % denominator: number in initial cohort w/o Master's at hire

* includes those in the Teacher Residency program and resident teachers in no program

Table 21: **2000-01 Cohort Teachers who Progressed to Master's Degree and Remained with BCPSS (Cumulative)**

	Total w/o Master's at hire	01-02		02-03		03-04	
		n	%	n	%	n	%
Total	908	13	1.4%	78	8.6%	69	7.6%
Certified	76	2	2.6%	5	6.6%	3	3.9%
Provisional	659	8	1.2%	24	3.6%	29	4.4%
Alternative Certification	173	3	1.7%	49	28.3%	37	21.4%
Resident Teacher* (RT)	16	0	0.0%	1	6.3%	1	6.3%
Project Site Support (PSS)	102	1	1.0%	26	25.5%	21	20.6%
Teach For America (TFA)	11	0	0.0%	0	0.0%	N/A	N/A
PSS and TFA	44	2	4.5%	22	50.0%	15	34.1%
RT & PSS	N/A	N/A	N/A	N/A	N/A	N/A	N/A

n= number in system who progressed (cumulative, after attrition) % denominator: number in initial cohort w/o Master's at hire

* includes those in the Teacher Residency program and resident teachers in no program

Table 22: **2001-02 Cohort Teachers who Progressed to Master's Degree and Remained with BCPSS (Cumulative)**

	Total w/o Master's at hire	02-03		03-04	
		n	%	n	%
Total	771	32	4.2%	62	8.0%
Certified	65	5	7.7%	3	4.6%
Provisional	565	24	4.2%	22	3.9%
Alternative Certification	139	3	2.2%	37	26.6%
Resident Teacher* (RT)	2	N/A	N/A	N/A	N/A
Project Site Support (PSS)	125	2	1.6%	34	27.2%
Teach For America (TFA)	48	1	2.1%	8	16.7%
PSS and TFA	N/A	N/A	N/A	N/A	N/A
RT & PSS	N/A	N/A	N/A	N/A	N/A

n= number in system who progressed (cumulative, after attrition) % denominator: number in initial cohort w/o Master's at hire

* includes those in the Teacher Residency program and resident teachers in no program

Table 23: **2002-03 Cohort Teachers who Progressed to Master's Degree and Remained with BCPSS (Cumulative)**

	Total w/o Master's at hire	03-04	
		n	%
Total	744	46	6.2%
Certified	66	2	3.0%
Provisional	442	3	0.7%
Alternative Certification	233	41	17.6%
Resident Teacher* (RT)	27	0	0.0%
Project Site Support (PSS)	108	18	16.7%
Teach For America (TFA)	98	23	23.5%
PSS and TFA	N/A	N/A	N/A
RT & PSS	N/A	N/A	N/A

n= number in system who progressed (cumulative, after attrition) *% denominator: number in initial cohort w/o Master's at hire*

* includes those in the Teacher Residency program and resident teachers in no program