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Attrition of New Teachers Among Recent College Graduates

**Comparing Occupational Stability Among 1992–93
Graduates Who Taught and Those Who Worked in Other
Occupations**

Executive Summary

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Robin R. Henke
Lisa Zahn
MPR Associates, Inc.

C. Dennis Carroll
National Center for Education Statistics

U.S. Department of Education

Rod Paige
Secretary

National Center for Education Statistics

Gary W. Phillips
Acting Commissioner

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Executive Summary

News reports frequently discuss the shortage of elementary/secondary teachers in the United States. Increasing enrollments, particularly in the elementary grades; increasing rates of retirement among teachers; and the efforts of states and localities to reduce class size may well have contributed to many of these shortages (Johnson 2001). In recent years, enrollments in public and private elementary and secondary schools have grown considerably, and most expect that they will continue to climb through 2005, after which they are expected to drop slightly through 2010 (Gerald and Hussar 2000). Nevertheless, shortages may well continue since the proportion of teachers who retire each year is expected to rise (Goodnough 2000). As experienced baby-boomer teachers retire, they are likely to be replaced by young and inexperienced teachers, whose attrition rates are higher than those of mid-career teachers (Archer 1999; Grissmer and Kirby 1997).¹

Many researchers and policymakers attribute the higher attrition rate among new teachers to their working conditions (e.g., Baker and Smith 1997). Therefore, to encourage new teachers to remain in the profession, many states and localities have launched programs to support them (Archer 1999; Cooperman 2000). Policy analysts have also

recommended that schools and districts professionalize teaching to improve retention (Kanstoroom and Finn 1999; Holmes Group 1986; National Commission on Teaching and America's Future (NCTAF) 1996, 1997).

Such policy initiatives may help new teachers become better teachers more quickly and may increase occupation stability among all teachers; however, they do not address other possible reasons for attrition among new teachers. Although such attrition has received considerable research attention over the years (Darling-Hammond 1984; Murnane et al. 1991), whether new teachers are more likely than college graduates beginning careers in other professions to change occupations has not yet been addressed. High attrition from initial occupations may be endemic to new college graduates' entry into the labor market, regardless of occupation, as new graduates learn about the workplace and about their strengths and weaknesses as well as what they like and dislike about their jobs. In addition, interest or aptitude for a field in an academic setting may not always translate into satisfaction in a related occupation. Particularly among graduates who majored in academic, rather than applied, fields of study, information about the kinds of work available to them and their affinity for it may be limited. If new college graduates change occupations at similar rates regardless of their early occupations, reducing attrition among new teachers may be as much a matter of helping college students and new graduates choose, plan, and prepare for their careers as supporting new teachers and professionalizing teaching.

¹Schools and Staffing Survey (SASS) data from 1994–95 indicate that about 8 percent of teachers who had taught less than 4 years left the profession since the previous school year, and that about 7 percent of teachers with 4 to 9 years of experience did so (Whitener et al. 1997). In contrast, between 4 and 5 percent of teachers with 10 to 24 years of experience left between 1993–94 and 1994–95. Other SASS estimates indicate that approximately 30 percent of new teachers leave the profession within the first 5 years of entry (Ingersoll as cited in Archer 1999).

This research examines the occupation stability of bachelor's degree recipients during the first 4 years after receiving the bachelor's degree. The analyses address the following question: were graduates who were teaching in 1994 more or less likely than those in other occupations to leave the work force or work in a different occupation in 1997?

Data and Methodology

The 1993 Baccalaureate and Beyond Longitudinal Study (B&B:93) provided the data for these analyses. NCES first surveyed a nationally representative sample of about 11,200 students who received bachelor's degrees between July 1, 1992 and June 30, 1993 in the spring of 1993, and then again in 1994 and 1997. These analyses are based on the 83 percent of the original sample, about 9,300 graduates, who participated in all three B&B survey administrations.

The B&B data provide an important opportunity to compare the behavior of a significant proportion of new teachers to that of their nonteaching peers. However, results from these analyses cannot be generalized to all new teachers in 1994 or 1997 because many new teachers do not begin teaching immediately after completing a bachelor's degree.

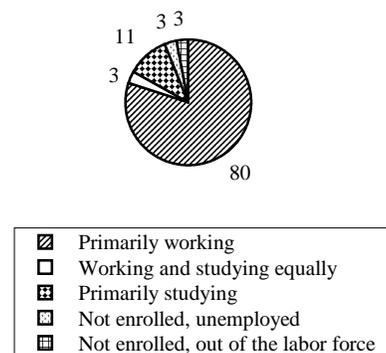
These analyses are based largely on composite variables developed from graduates' reports of what they were doing during both April 1994 and 1997. Composites were created to summarize graduates' major activities (e.g., working, studying, or both) in 1994 and 1997, whether their major activities differed between April 1994 and April 1997, and whether their occupations differed between the two years.

Results

Teaching and Teacher Attrition Among 1992–93 Bachelor's Degree Recipients

In April 1994, 80 percent of 1992–93 graduates were primarily working,² and another 3 percent combined study and work equally. The remaining graduates were primarily studying (11 percent), were not enrolled and either unemployed (3 percent) or were out of the labor force (3 percent) (figure A). Kindergarten through 12th-grade teachers made up 10 percent of graduates who were working full time in April 1994 (figure B).

Figure A—Percentage distribution of 1992–93 bachelor's degree recipients according to main activity: April 1994



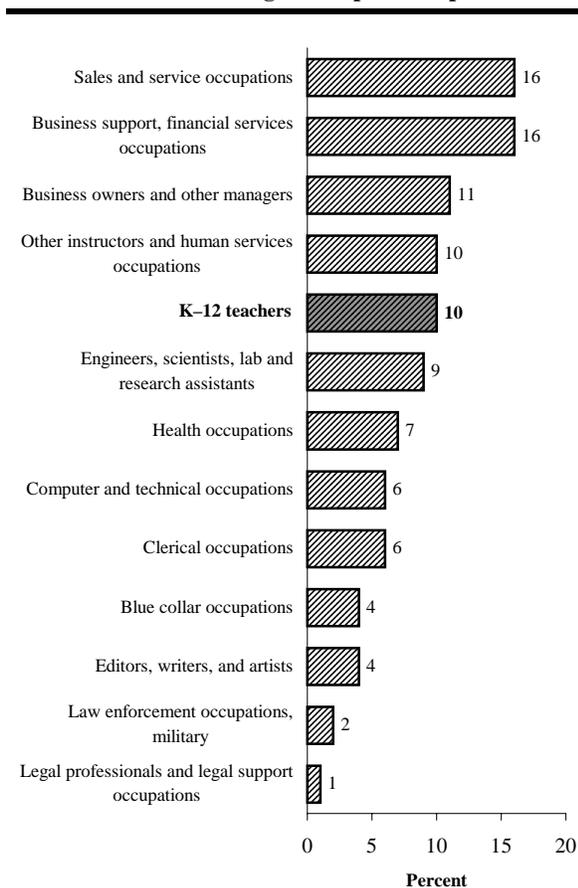
NOTE: Percentages may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1992–93 Baccalaureate and Beyond Longitudinal Study, Second Follow-up (B&B:93/97), Data Analysis System.

Whether they were employed full time or part time in April 1994, most graduates who worked as K–12 teachers in April 1994 were also employed

²Graduates who were primarily working were working for pay full time or part time, but they were working more than they were studying. This category includes graduates who were working full time and either not enrolled or enrolled part time and graduates who were working part time and not enrolled.

Figure B—Percentage distribution of 1992–93 bachelor’s degree recipients who were employed full time according to occupation: April 1994



NOTE: Percentages may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1992–93 Baccalaureate and Beyond Longitudinal Study, Second Follow-up (B&B:93/97), Data Analysis System.

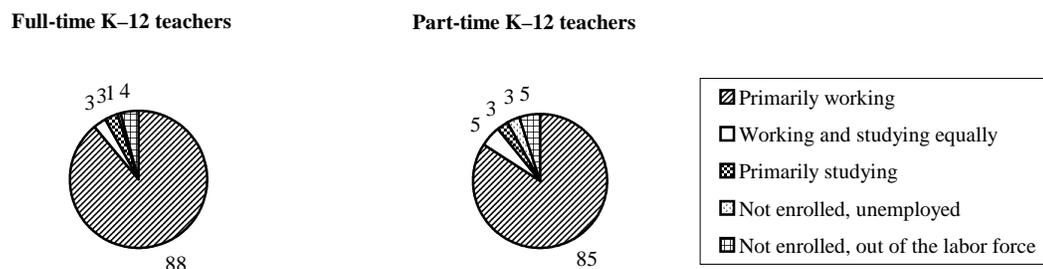
in April 1997. Among those employed full time as K–12 teachers in April 1994, 88 percent were primarily working, 3 percent were working and studying equal amounts, and 3 percent were primarily studying in April 1997 (figure C). Among those employed part time as K–12 teachers in April 1994, 85 percent were primarily working, 5 percent were working and studying equal amounts, and 3 percent were primarily studying in April 1997.

Among those who were employed as full-time K–12 teachers in April 1994 and who also worked in April 1997, 82 percent were still teaching in April 1997 (figure D). Furthermore, none of the other occupation categories proved more stable than teachers. In particular, K–12 teachers were as likely as those who worked in health occupations; engineers, scientists, and lab and research assistants; and several other white collar occupation categories to work in the same occupation category in both 1994 and 1997.

Somewhat fewer of those who were working part time remained in teaching. Among April 1994 part-time K–12 teachers who worked in April 1997, 67 percent worked as K–12 teachers in April 1997. Nevertheless, among graduates who worked in April 1997, graduates who worked part time in April 1994 as K–12 teachers were more likely than those who worked part time as computer or technical workers, sales/service representatives, blue-collar workers, business owners or other managers, or clerical workers to work in the same occupation in April 1997. In other words, part-time K–12 teachers were as likely as graduates who worked part time in the remaining occupations to work in the same occupation in both time periods.

In addition to perceptions that the overall new teacher attrition rate is high, policymakers and researchers fear that, among teachers, those who major in fields other than education, particularly mathematics and the natural sciences, are more likely than education majors to leave the profession. The B&B:93/97 data indicate that among those who were primarily working in April 1994, there were no differences between teachers with majors in education and those with majors in engineering, mathematics, or the natural sciences in the proportion who were primarily working in April 1997. However, among K–12 teachers in

Figure C—Percentage distribution of 1992–93 bachelor’s degree recipients who were employed as K–12 teachers in April 1994 according to main activity in April 1997, by April 1994 employment status



NOTE: Percentages may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1992–93 Baccalaureate and Beyond Longitudinal Study, Second Follow-up (B&B:93/97), Data Analysis System.

April 1994 who were working in April 1997, 70 percent of those who had majored in engineering, mathematics, or the natural sciences were teaching at the K–12 level in April 1997, compared with 86 percent of education majors.

Thus, this analysis indicates that among 1992–93 college graduates who worked in April 1994, approximately a year after they had completed their bachelor’s degrees, those who taught at the K–12 level were among the most stable of all employed graduates with respect to their occupations 3 years later. Relatively few teaching graduates had different main activities or different occupations in April 1997 than they did in April 1994. Graduates who worked in other occupations for which employees train as undergraduates (e.g., engineering and health occupations) also had relatively low rates of attrition. Moreover, these occupations also tended to have higher professional status than the occupations in which graduates were more likely to change occupations between 1994 and 1997. Therefore, this report also examines whether two additional variables—graduates’ perceptions of the relationship between their postsecondary fields of study and occupations and

their views about the professional status of their occupations—vary with occupations and are associated with changing occupations between April 1994 and April 1997.

Relationship Between April Occupations and Postsecondary Fields of Study

Among those working as K–12 teachers in April 1994, nearly all reported that their jobs were related to the field they studied as undergraduates (97 percent among full-time teachers and 96 percent among part-time teachers). Similarly, among graduates who were working full time in April 1997, 93 percent of K–12 teachers reported that their jobs were somewhat or closely related to their graduate or undergraduate field of study. In both 1994 and 1997, the proportions of graduates employed full time in a health occupation or as engineers, scientists, or lab/research assistants who indicated that their jobs were related to their undergraduate major were similar to those of teachers.

Graduates who worked in many other occupations, however, were considerably less likely to

Figure D—Among 1992–93 bachelor’s degree recipients who worked full time in April 1994, percentage who worked in the same occupation category in April 1997, by April 1994 occupation



*Statistically significantly different from K–12 teachers at the .05 level.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1992–93 Baccalaureate and Beyond Longitudinal Study, Second Follow-up (B&B:93/97), Data Analysis System.

report that their jobs were related to their undergraduate majors. In April 1994, graduates who worked in clerical, blue-collar, or sales/service occupations or as business owners or other managers were less likely than teachers to report that their jobs were related to their undergraduate majors: 72 percent or less of graduates in these occupations did so. Furthermore, among full-time employees, other instructors or human services

personnel (88 percent) and business support or financial services personnel and computer/technical workers (81 percent each) were less likely than teachers to report that their jobs were related to their undergraduate fields of study.

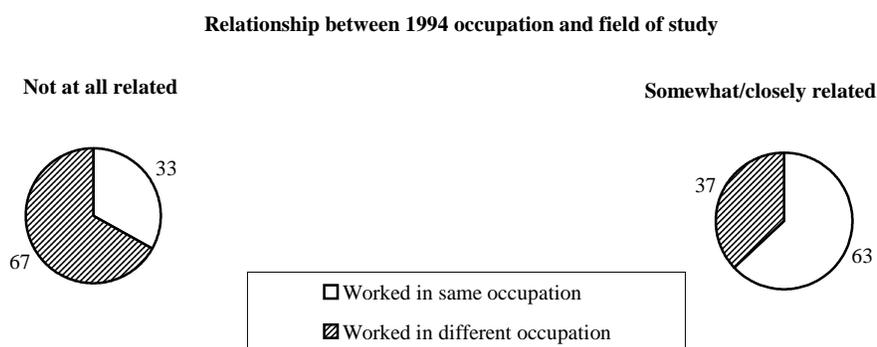
Among graduates who were working full time in April 1997, 93 percent of K–12 teachers reported that their jobs were somewhat or closely related to their graduate or undergraduate field of study, a proportion similar to that among those working full time as an engineer, scientist, or lab/research assistant (93 percent) or in a health occupation (92 percent). In April 1997, full-time K–12 teachers among 1992–93 college graduates were more likely than those working in all other occupation categories except legal occupations and editors, writers, and artists to report that their jobs were related to their postsecondary fields of study.

As one might expect, graduates who reported that their April 1994 occupations were somewhat or closely related to their undergraduate fields of study were considerably less likely than those who reported that their 1994 occupations were not at all related to work in a different occupation in April 1997. Whereas 37 percent of graduates with jobs related to their field of study in 1994 worked in a different occupation 3 years later, 67 percent of those with unrelated jobs did so (figure E).

Professional Status of April Occupations

Four-fifths of graduates who worked as full-time K–12 teachers in April 1994 believed that their teaching job both required a bachelor’s degree and had possible or definite career potential. Although a similar proportion (79 percent) of graduates who worked full time as engineers, scientists, or lab/research assistants perceived their jobs as having similar professional status, graduates who worked full time in all other occupation

Figure E—Percentage distribution of 1992–93 bachelor’s degree recipients who worked in both April 1994 and April 1997 according to whether the two occupations differed, by whether 1994 occupation was related to undergraduate field of study



NOTE: Percentages may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1992–93 Baccalaureate and Beyond Longitudinal Study, Second Follow-up (B&B:93/97), Data Analysis System.

categories were less likely to share that perception. In April 1997, 78 percent of graduates employed full time as K–12 teachers reported that their jobs required a degree and had possible or definite career potential. In contrast, 68 percent or less of all other full-time employed graduates—except engineers, scientists, or lab/research assistants and those in legal occupations—reported the same. In 1997, full-time teachers were not more likely than part-time teachers to report that their jobs required a degree and had career potential.

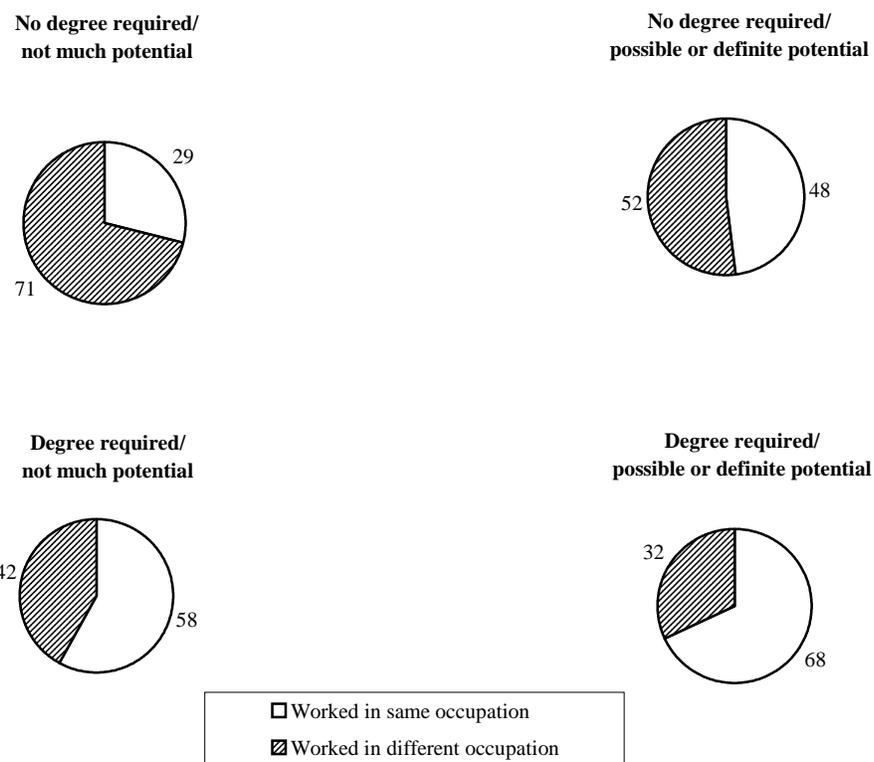
Again as one might expect, graduates who perceived their April 1994 occupations as requiring a degree and having career potential were less likely than those who perceived otherwise to be working in a different occupation in April 1997. Among graduates who worked in both April 1994 and 1997, 32 percent of those who reported that their April 1994 jobs required a degree and had career potential were working in a different occupation in April 1997 (figure F). In contrast, 71 percent of

those who reported that their 1994 job did not require a degree and did not have career potential worked in a different occupation 3 years later.

Changing Occupations: Multivariate Analysis

A multiple regression analysis was conducted to determine whether, after controlling for graduates’ perceptions of their jobs’ professional status and relationship to their undergraduate majors, occupation in 1994 remained associated with their likelihood of working in the same occupation in April 1997. The analysis indicated that after controlling for age, gender, college entrance examination scores, cumulative undergraduate GPAs, perceived professional status of occupation, and perceived relationship between April 1994 occupation and undergraduate major, teaching remained among the most stable occupations. In fact, graduates in no occupation category were more stable than teachers.

Figure F—Percentage distribution of 1992–93 bachelor’s degree recipients who worked in both April 1994 and April 1997 according to whether the two occupations differed, by whether 1994 occupation required a bachelor’s degree and had career potential



NOTE: Percentages may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1992–93 Baccalaureate and Beyond Longitudinal Study, Second Follow-up (B&B:93/97), Data Analysis System.

Graduates’ perceptions of their April 1994 job’s professional status and of the relationship between their undergraduate field of study and their April 1994 job were, independently, related to whether they worked in the same occupation category at both points in time. Graduates who perceived their April 1994 job as unrelated or somewhat related to their undergraduate major field of study were less likely than those who perceived a close relationship to work in the same occupation in 1997 as in 1994. Graduates who reported that a degree was required to obtain their April 1994 occupation were more likely to work in the same occupation category at both points in

time than were graduates who did not, although graduates’ perceptions of the career potential of their jobs appeared not to make a difference.

Summary

Among graduates who were employed in April 1994 and April 1997, K–12 teachers (i.e., graduates who taught in 1994) were as likely as graduates who worked in other white collar, professional occupations to work in the same occupation category in April 1997. Specifically, approximately four-fifths of graduates who taught in April 1994 were also teaching in April 1997, and

similar proportions of graduates who worked in health occupations; as engineers, scientists, lab/research assistants; in legal occupations; in law enforcement or the military; or as business support/financial services workers worked in their

respective occupation categories in both April 1994 and April 1997. Graduates who worked in other occupation categories in April 1994 were less likely than K–12 teachers to work in the same occupation category at both points in time.