

**PUBLIC SCHOOL DISTRICT RETENTION RATES
AND OTHER EMPLOYMENT AFFILIATIONS
OF EDUCATION PROGRAM GRADUATES**

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INTRODUCTION

This paper delivers preliminary findings from an ongoing study of new teacher retention. We describe a research design that others can replicate and include preliminary findings to motivate updating, replication and comparative analyses of different teacher induction¹ paths.

The focus of this interim report is narrow—highlighting reliable data sources that eliminate a need to invest in costly and often less reliable survey data collection.

THE RESEARCH QUESTION

Are newly certified teachers who have completed a defined induction program retained by in-state public school districts? This is our primary research question. Ancillary questions that we have studied or intend to investigate are introduced later in this paper.

Alliance for Excellent Education (2008) and Rockoff (2008) provide an up-to-date introduction to teacher retention research findings and references. Induction broadens and deepens an aspiring teacher's understanding of the profession. At the same time, mentors and teacher colleagues observe the certification candidate's qualifications to succeed.

Induction is demanding—much is expected from the teacher aspirants, participating mentors and teacher colleagues. Retention is a prerequisite for those involved and taxpayers² to receive a return on their investment.

¹ American Association of State Colleges and Universities, *Teacher Induction Programs: Trends and Opportunities*, 3:10 (October 2006) reports that the Alliance for Excellent Education “identifies the components of comprehensive induction as high-quality mentoring, common planning time and collaboration, ongoing professional development, participation in an external network of teachers, and standards-based evaluation.”

² State and local tax revenues contribute to the support of teacher induction when a public teacher education program is one of the induction delivery partners.

DATA SOURCES

We used three administrative³ data sources in our teacher retention research to date:

- Transcript extracts for 1,030 FY2004 and 1,183 FY2005 education baccalaureate degree recipients from eight University System of Maryland campuses who completed a teacher induction program and received state certification.
- Maryland Department of Labor, Licensing and Regulation quarterly employment and earnings records⁴ for the graduates, July 2004 through September 2006.
- District of Columbia, New Jersey, Ohio, Pennsylvania, Virginia and West Virginia quarterly employment and earnings records, July 2004 through September 2006.

From a replication perspective:

- Transcript extract information about education program graduates should be available in most states, subject to applicable confidentiality requirements and inclusion of an accurate Social Security Number that is needed to link with the other two data sources.
- Less confidence is expressed about ease of authorized access to the State UI Wage Record information. However, like Maryland, a growing number of states have established various ways to conduct performance accountability studies covering a range of education, employment training, economic development and support services programs.⁵
- The multi-state data exchange capability is unusual, but not unique.

³ Administrative records are distinguished from statistical data sources. Administrative records are collected and maintained for a program management purpose. The accuracy and completeness of these records is largely determined by the management use(s) of the data. Statistical data are typically subject to more stringent accuracy and completeness standards.

⁴ These administrative data are commonly called UI Wage Records, but the dollar amount reported by employers to comply with the State's unemployment compensation statute is actually the total amount paid to an employee during a reference quarter. Details about this data file are available by contacting the presenting coauthor at dstevens@ubalt.edu or calling 410-837-4729.

⁵ The Jacob France Institute at the University of Baltimore, a University System of Maryland campus and home to two of the four coauthors, maintains an archive of Maryland UI Wage Records and other longitudinal files of administrative records as an agent of multiple state agencies. Authorized use of these confidential records for each defined purpose requires written approval from the record owning agency or agencies. Similar capabilities are known to exist in other states, including California, Florida, Georgia, Illinois, Missouri, New Jersey, Ohio, Texas, Virginia and Washington.

OVERVIEW OF RESEARCH APPROACH TO DATE

Loss of newly certified teacher availability begins with a graduate's choice of first job (Harris, 2004), continues at different rates among schools and districts for those who do begin teaching (NCTAF, 2003) and imposes high and differing recruitment, hiring and training costs on schools and districts (Barnes, Crowe and Schaefer, 2007).

Schools participating in a teacher induction program have an opportunity to evaluate apprentice teachers during the pre-certification segment of the full induction experience. The aspiring teachers have a reciprocal opportunity to assess the school for continued employment selection if offered following their certification. This shared opportunity sharply reduces recruitment and search costs.⁶

Our measure of teacher retention in a Maryland public school district is defined by reference year/quarter appearance as affiliated with a public school district⁷ in the Maryland UI Wage Record file:

- The unit of analysis is public school district, not individual school within a district. We have confirmed that each of the 24 Maryland public school districts is defined in the Maryland UI Wage Record file.⁸ Preliminary counts of private school affiliations have been calculated, but this involves multiple challenges to reliable counting.
- Our definition of public school district employment affiliation does not permit separation of teaching and administrative responsibilities. The Maryland UI Wage Record file contains no occupational information.

An undergraduate education student's opportunity to complete the Maryland baccalaureate-level teacher induction program is dependent upon the cooperation and location of an eligible school with required mentoring capability. These criteria are not satisfied uniformly among the 24 Maryland public school districts (counties).

⁶ Of course, mentoring and other costs associated with a school's participation in the teacher induction program, costs borne by the aspiring teacher during this intensive induction phase (Fulton, Yoon and Lee, 2005), and costs absorbed by the University System of Maryland education schools that deliver teacher induction support services must be factored into a calculation of any 'saving' from this reciprocal assessment by school staff and teacher aspirant.

⁷ Maryland public school districts are defined by county boundaries, or in the case of Baltimore City the county-equivalent boundary. So, there are 24 Maryland public school districts.

⁸ This confirmation followed a question whether public school employment may be reported under a generic county government state UI tax account number.

PRELIMINARY FINDINGS

For the FY2004 graduates we define the July-September (3rd) quarter of calendar years 2004, 2005 and 2006 as the reference points for calculating in-state K-12 public school district entry and retention. For the FY2005 graduates only the 3rd quarter 2005 and 2006 reference points are available.⁹

Our out-of-state data matching initiative has been limited to recording whether a certified teacher in our combined population of 2,213 FY 2004 and FY2005 graduates is found in another state's UI Wage Record file, not whether those found are employed in the public education sector of that state.

An additional step of uncertain cost and likelihood of success would seek collection of the industry affiliation¹⁰ of those found in one or more of the five cooperating states or the District of Columbia. There may be interest in regional reciprocity among these states to study interstate teacher mobility paths and timing.

The FY2004 graduates (N=1,030)

At the beginning of the fall 2004 school-year 604 (58.6 percent) of the FY2004 newly certified teachers appear as affiliated with a Maryland public school district in the Maryland UI Wage Record file.¹¹ Another 207 (20.1 percent) of the FY2004 newly certified teachers appear in the July-September 2004 Maryland UI Wage Record data file without a Maryland public school district affiliation.¹²

The Maryland public school district employment number one year later at the beginning of the 2005 school-year increased to 702 (68.2 percent), then fell slightly to 690 (67 percent) at the beginning of the 2006 school-year.

⁹ 2007 3rd quarter data are available but have not been processed for this study yet. The 2008 3rd quarter update for extended retention analysis will be available to the coauthors in early 2009.

¹⁰ Collection of North American Industry Classification System (NAICS) codes would provide some insight into whether graduates from Maryland's public teacher education programs are leaving Maryland to accept a public education job elsewhere.

¹¹ We have not yet investigated how many of these baccalaureate degree recipients enrolled in a full-time University System of Maryland graduate education program, and would not have been available to accept an entry-level teaching appointment. National Student Clearinghouse data may be queried to broaden measurement of this at least temporary diversion from entry into public school teaching to other graduate schools and disciplines nationwide.

¹² Our preliminary scan for Maryland *private* school affiliations found 38 (3.7 percent) out of these 207 were employed by a private education organization.

The July-September 2004 match of FY 2004 newly certified teachers with District of Columbia, New Jersey, Ohio, Pennsylvania, Virginia and West Virginia UI Wage Records found 77 (7.5 percent). Again, at this time we are unable to assign an industry code to these out-of-state record matches.

Combined, the multi-state matching of new teacher education graduates with UI Wage Records found 86.2 percent at the beginning of the next school year—58.6 percent affiliated with a Maryland public school district, 20.1 percent in a different Maryland employment setting (at least 3.7 percentage points of this 20.1 percent figure known to be a Maryland private education affiliation), and 7.5 percent known to have been employed in one of the other five states or District of Columbia.¹³

The FY2005 Graduates (N=1,183)

At the beginning of the fall 2005 school-year 794 (67.1 percent) of the FY2005 newly certified teachers appear as affiliated with a Maryland public school district—8 percentage points higher than the immediate entry rate level for their predecessors who graduated one year earlier.¹⁴ The employment number one year later at the beginning of the 2006 school-year increased to 843 (71.3 percent).

Another 174 (14.7 percent) appear without a Maryland public school affiliation, including at least 30 (2.5 percent) known to be a Maryland private education affiliation. And 106 (9 percent) were found in the July-September 2005 out-of-state matching cycle. So, cumulatively, 90.8 percent of the 2005 graduates were found in the record matching cycle including the beginning of the next school-year.

CONCLUSION

Exclusive reliance on administrative data sources results in a high success rate for recording the employment affiliations of newly certified teachers. An early next step in our ongoing research will be to add enrollment in graduate education, which will increase the success rate even higher.

We have completed, but not included here, a preliminary origin-destination mapping of district-to-district movement of the 2,213 newly certified teachers. Interpretation of these moves is complicated by the geographic unevenness of district opportunities to complete the induction program requirements.

¹³ Again, a match against National Student Clearinghouse records and/or University System of Maryland graduate program records would increase this discovery rate beyond the 87 percent level.

¹⁴ Our preliminary speculation is that this reflects the continuing maturation of the University System of Maryland induction program, but other contributing factors must be considered.

Unanswered at this early stage of our research is a qualitative judgment about the calculated three-year and two-year in-state public school district retention rates for the FY2004 and FY2005 education baccalaureate degree recipients respectively. We do not have a benchmark retention rate level to use for comparison purposes (Harris and Adams, 2007).

Also unanswered to date is the impact of a defined induction program on retention (Smith, 2004). We have completed the initial research design steps to collect retention information for teachers certified through alternative paths.

Finally, the research approach adopted to study teacher retention can be followed for any undergraduate or graduate major, such as the Science, Technology, Engineering and Mathematics (STEM) disciplines.

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