

Building and Using Data Systems to Improve Teacher Education in New York

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- 1. Elements of a P-16 Database**
- 2. Where is New York?**
- 3. Why should New York develop a comprehensive P-16 Educational database?**
 - a. Management**
 - b. Policy development**
 - c. Accountability**
- 4. Examples of Policy Evaluation**
 - a. Alternative pathways**
 - b. Components of teacher preparation**
 - c. Teacher retention**
 - d. Effects of teacher certification**

Designing a P-16 Longitudinal Database for New York

Data Elements	NYS	NYC
Core Data (Data Quality Campaign)		
<ol style="list-style-type: none"> 1. A unique statewide student identifier 2. Student-level enrollment, demographic and program participation information 3. The ability to match individual students' test records from year to year to measure academic growth 4. Information on untested students 5. A teacher identifier system with the ability to match teachers to students 6. Student-level transcript information, including information on courses completed and grades earned 7. Student-level college readiness test scores 8. Student-level graduation and dropout data 9. The ability to match student records between the Pre K–12 and higher education systems 10. A state data audit system assessing data quality, validity and reliability 	<p>✓</p>	<p>✓ ✓ ✓ ~ ~</p>
Teacher Preparation Data (teacher-level)		
<ol style="list-style-type: none"> 1. Teacher socio-demographic information 2. Certification pathway 3. Certification exam scores 4. Program selectivity 5. Transcript, major 6. Structure and content of field experiences 7. Qualifications of faculty 8. Development of specific knowledge and skills (e.g., subject-based pedagogy) 	<p>~ ~ ✓</p>	<p>~ ~</p>
Professional development (teacher-level)		
<ol style="list-style-type: none"> 1. Quantity/frequency of professional development 2. Content of professional development and connection to career development 3. Nature of professional development (e.g., embedded or not) 4. Quality of professional development 5. Identity and qualification of presenters 		

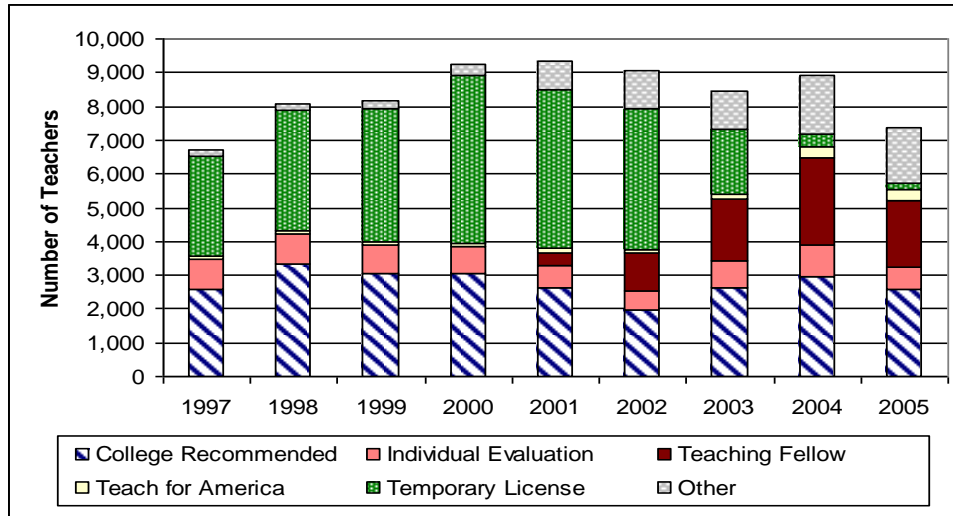
✓ In database

~ In some cases or for some variables

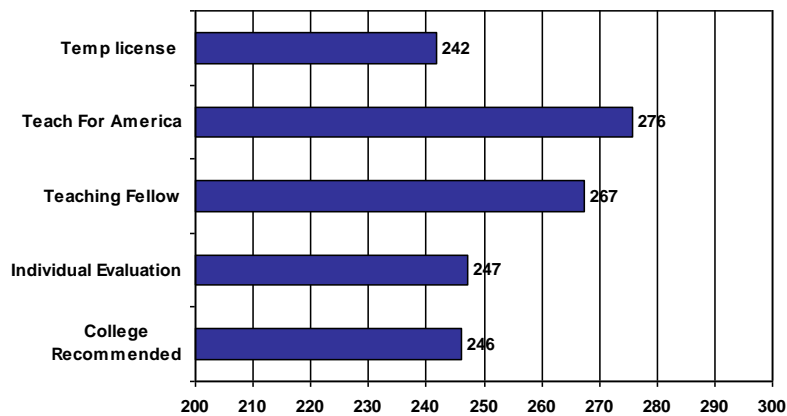
Teacher Pathways Project

Don Boyd, Hamp Lankford, Pam Grossman,
Susanna Loeb, Jim Wyckoff

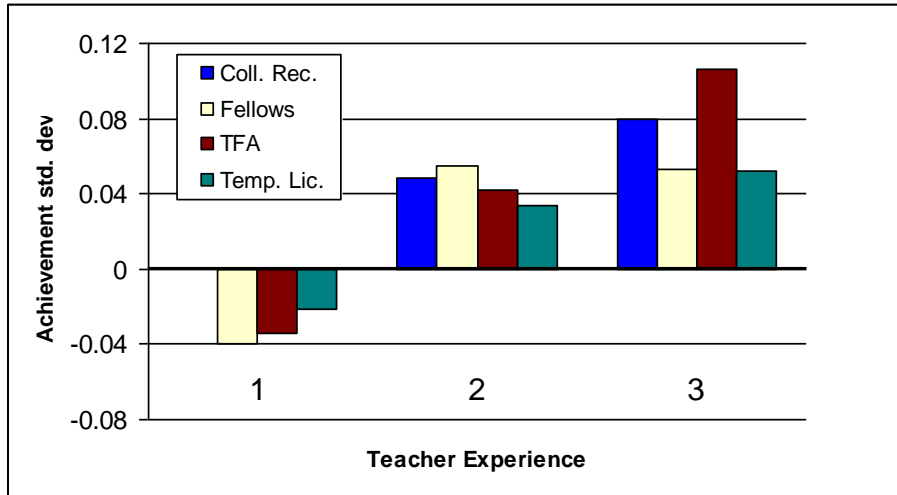
Number of entering NYC teachers by pathway 1997-2005



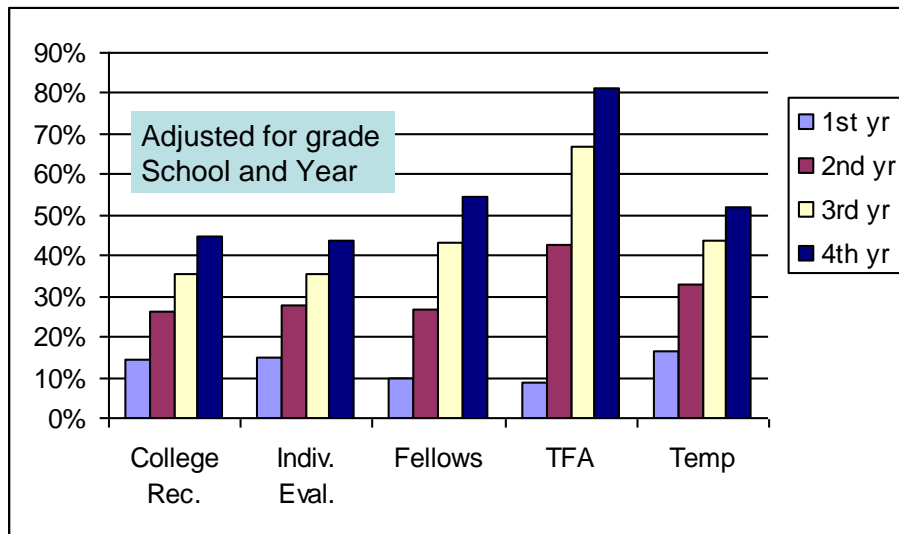
Average LAST Certification Exam Scores Entering NYC Teachers, by Pathway 2004



Student Achievement Gains Accruing to Teacher Pathways (Coll. Rec. 1 yr =0; 4-5 gr. Math)

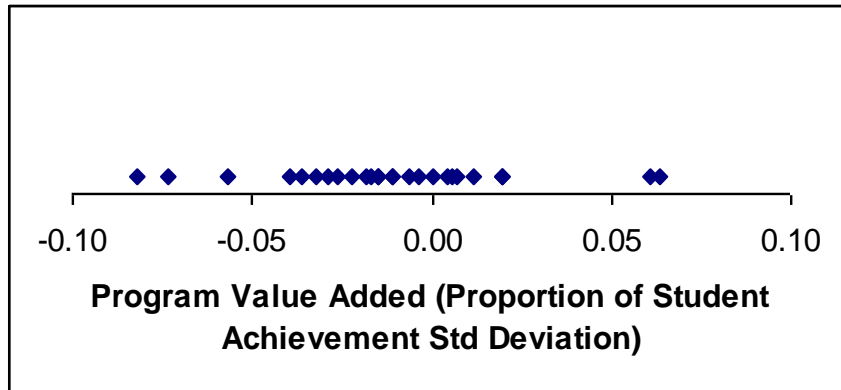


Grades 4-8 Teacher Attrition, 1st Four Years of Teaching, 1999-2003 Cohorts



Childhood Math Program Value-Added

Grades 4-8 & Programs with at least 50 observations, with school fixed effects and controlling for teacher attributes



As comparisons, passing the LAST = .02**, 2nd year = -.05, 7th year = -.13***

Aspects of Teacher Preparation that Impact Student Achievement in NYC

- Opportunities to engage in assignments that are closely tied to practice (e.g. analyze student work)
- Opportunities to study the NYC curriculum
- Similarity between student teaching and first job for Math

Construct	Coefficient
Assignments based in Practice	0.130***
NYC curriculum	0.041***
Field exp/job congruence	0.070***