Linking High School Data and Post-Secondary Outcomes in NYC: A Researcher's Perspective

A Case Study of Lessons Learned When PreK-12 and Postsecondary Institutions Collaborate

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COLLEGE READINESS INDICATOR SYSTEMS

Agenda

- CRIS Background Information
- Features Instructions
- Introduction of Presenters
- Presentation (15 – 20 minutes)
- Q&As
- Conclusion
- Surveys

College Readiness Indicator System (CRIS) Network

- **Two Partners, One Project**
  - Annenberg Institute for School Reform
  - John W. Gardner Center
- **Five Sites**
  - Dallas Independent School District
  - New Visions for Public Schools (New York)
  - School District of Philadelphia
  - Pittsburgh Public Schools
  - San Jose Unified School District
- **Overarching Goal**
  - To help develop, expand and modify current indicator systems that identify and support young people to be college ready
- **To learn more about CRIS**
  - Visit the CRIS webpage at http://annenberginstitute.org/cris

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Webinar Features Instructions

- **Questions during the Webinar**
  - Chat Function: Send your questions to **Jaein Lee**

- **Technical Support**
  - Chat Function: Request help to **Jason Masten**
  - Email: jason_masten@brown.edu

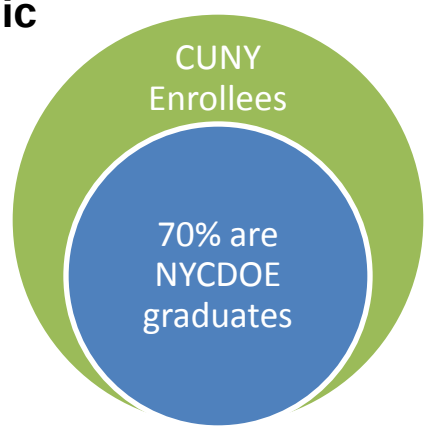
The Need for Collaboration / A PreK-20 Data System

What NYC sought to do:

- **In 2010, the "Leaky Pipeline" Grant was awarded to the NYCDOE to:**
  - help the DOE understand the factors that lead to college readiness and examine the college outcomes of its students.
  - hire a dedicated researcher to work with DOE, CUNY, and other partners in this venture.

Why NYC is an ideal district to create a PreK-20 tracking system:

- **NYCDOE is the largest urban school system in the U.S., with 1.1 million students across 1600+ schools** (http://schools.nyc.gov)
- **The City University of New York (CUNY) is the largest urban public university system in the nation** (http://www.cuny.edu)
  - 6 Community Colleges, 11 Senior Colleges, Graduate and Law School
- **There is substantial overlap in the two populations:**
  - ~40% of all NYCDOE graduates attend CUNY in the first fall after HS graduation.
  - ~70% of CUNY first-time freshmen graduated from the NYCDOE.



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The Need for Collaboration / A PreK-20 Data System

The First Steps to Establishing a Collaboration and Data Exchange

- **Generate a Memorandum Of Understanding (MOU)**
  - CUNY/ NYCDOE established their MOU in August 2008
  - Two-way data-sharing agreement created an opportunity to examine the common research goals of both institutions

- **Establish Shared Research Agenda/Goals**
  - Conduct research to directly inform operational policy
  - Conduct research prioritization determined by core operational needs
  - Create helpful resources for schools
  - Conduct research that can generate data to support school-level efforts in college advisement and college readiness
  - Increase NYCDOE students' college readiness

- **Establish Key Partners at Both Institutions**
  - NYCDOE's Research and Policy Support Group
  - CUNY Office of Institutional Research Assessment
  - CUNY Office of Policy Research

The Need for Collaboration / A PreK-20 Data System

What data was linked together

Data Sent from DOE to CUNY

- **Population**: All NYCDOE students enrolled in grades 9-12
- **Schedule**: Once a year
- **Data elements included:**
  - Demographics, including free/reduced lunch status
  - Student transcript data
  - State test scores
    - 8th grade ELA and Math
    - NYS Regents exams

Data Sent to DOE from CUNY

- **Population**: All NYCDOE students who applied to or enrolled at CUNY
- **Schedule**: Twice a year
- **Data elements included**:
  - Demographics
  - Test scores: SAT and assessment test results
  - Enrollment in remedial courses
  - Course and grade data
  - Retention and graduation status

College Readiness Data And Research:

What To Consider When Institutions Collaborate

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What to Consider When Institutions Collaborate:
Appoint a core set of researchers (within and across institutions)

The Problem: *No core set of researchers defined at the outset of the project*

- Unstructured communication and lack of a shared dataset
- Delayed and duplicated work (sometimes with different findings across institutions)

The Solution/ Lesson Learned	Details
Appoint a dedicated research team	• Communicate frequently and work collaboratively on research agendas • Create and maintain a shared data warehouse
Create a team of accessible, diverse team members	• *Programmers:* for specific questions on data structure and design • *Data analysts and researchers:* for questions related to the data fields • *Directors:* for policy-related questions and informing the entire team about any policy changes in their respective institutions
Hold regularly scheduled meetings	• Weekly meetings worked best – especially at the start • After data exchange is established, bi-weekly or monthly meetings to continue conversation about research using the data

What to Consider When Institutions Collaborate:

Establish best practices for matching datasets

The Problem:

- Correctly identifying NYCDOE students who enrolled at CUNY

The Solution / Lessons Learned:

- Understand the best combination of identifying information to match students
  - First name, last name, and DOB uniquely identifies 99.95% of NYCDOE students
  - Adding in school uniquely identifies 99.99% of NYCDOE students.

What's in a name?
• **Matching on first and last name only: 283,446 duplicates** ***Fun Fact:*** There are 142 students named 'Jose Rodriguez' in the NYCDOE. ***Fun Fact:*** There are 215 students named 'Unique' enrolled in the NYCDOE.
• **Matching on on last name and DOB only: 169,591 duplicates** ***Fun Fact:*** Eight NYCDOE students with the last name of Chen were born on 12/15/1995.
• **Matching on last name, DOB, and school: 20,818 duplicates** ***Fun Fact:*** Assuming these are all siblings, there are at least 10,126 sets of twins, 182 sets of triplets, and 5 sets of quadruplets attending the same school within the NYCDOE.

What to Consider When Institutions Collaborate:

Establish best practices for matching datasets

Example of the Solution/Lessons Learned:

- Understand what can happen if you must use first name and last name in your matching process

NYCDOE Data			CUNY Data			MISTAKE
LAST NAME	**FIRST NAME**	**MIDDLE**	**LAST NAME**	**FIRST NAME**	**MIDDLE**	
JOHNS	MARIA		JOHNNS	MARIA		typical misspelling
MCDANIEL	JOSEPH	I.	MC DANIEL	JOSEPH	I.	typical spacing difference
CARRY	PAULINE	J.	SMITH	PAULINE	J.	changed last name
DE LA ROSA	KAREN	M.	DE	LA	M.	spacing in the last name ends up with other names in the wrong places

- If you combine identifiers or have common identifiers, you can increase the accuracy of matching students

Note: In NYC, students receive a *Student ID* when they enter NYC Public Schools → This ID is requested on applications to CUNY → Allows for matching by ID rather than names or other identifiers (similar to a SS#)

What to Consider When Institutions Collaborate:
Clearly define populations of interest/cohort definitions

The Problem: How do the institutions align their cohort definitions?

Example: Which students do NYCDOE and CUNY include in analyses to answer the question: *What percent of students are first-time freshman enrollees in a given year?*

	NYCDOE	CUNY
How they tracked college enrollment:	By 9th grade entering cohorts (students in 9th grade in a given year)	By students first fall entry at CUNY (regardless of the year in which they graduated from a NYC HS)
Students must have graduated from the NYCDOE:	In June of the year of interest	Any Month/ Any Year
Students must have enrolled at CUNY:	In September of the year of interest	In September of the year of interest

The Solution/Lesson Learned: Different populations of interest and cohort definitions are acceptable, but need to be noted and understood when conducting research and presenting the findings on behalf of both institutions.

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What to Consider When Institutions Collaborate:
Maintain detailed data documentation

The Problem: Limited data documentation led to repetitive conversations

The Solution / Lessons Learned:

- The more documentation on the data, the better.
  - With staff transitions, lack of documentation can lead to wasted time for new staff.

GOOD EXAMPLE OF DATA DOCUMENTATION

Variable	Type	Width	Description	Source	Notes
GENDER	String	1	Gender	DOE	F=Female; M=Male
ETHNIC	Numeric	1	Ethnicity	DOE	1=Native Am. 2=Asian 3=Hispanic 4=Black 5=White
TIME_ AT_ COLLEGE	Numeric	3	Days student was enrolled in particular college for that semester	Created by *DOE Researcher*	Created by subtracting enrollment end and begin dates

EXAMPLE OF UNCLEAR DOCUMENTATION

Variable	Description
GENDER	Gender
ETHNIC	Ethnicity
TIME_ AT_ COLLEGE	Time student was enrolled in particular college for that semester

College Readiness Data And Research:

What NYC Has Accomplished Via These Data Partnerships

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What NYC has Accomplished via these Data Partnerships

Analytics conducted with shared dataset

Enrollment:

- Number of students graduating from a NYCDOE high school in four years and enroll in a CUNY Bachelor's or Associate's program the following fall
- College-enrollment rates among the NYCDOE high schools

Readiness / Need for Remediation:

- Over time, the proportion of students NYCDOE students with a Regents or Advanced Regents diploma that attend CUNY and non-CUNY colleges

Performance / Persistence

- Percentage of DOE grads enrolled in a Bachelor's or Associations program who are still enrolled one year later
- Relationships between DOE graduates' previous achievement (e.g., on the SATs, Regents) and first year college outcomes (i.e. GPA)

Demographic Differences:

- Gender and ethnic differences in college enrollment and persistence

What NYC has Accomplished via these Data Partnerships

Created new NYCDOE accountability metrics

- ***Where Are They Now Reports***
  - Provided to high school principals to track student outcomes after graduation, and analyze trends in terms of student progress and success, with a particular emphasis on the outcomes of CUNY students needing remediation vs. those who do not.
- ***Progress Reports*** *(Additional Metrics)*
  - 3 additional college-ready behavior metrics to include in future reports:

Metric	Description
College Prep Course Index	Percentage of students who have: •Taken/received a certain score on: Algebra II Regents, Advanced Placement, and/or International Baccalaureate exams •Received college credit through a CUNY dual enrollment program or taken/passed another approved college ready course/assessment
College Readiness Index	Percentage of students who have: Passed out of remediation, according to CUNY's standards (SAT and Regents scores)
College Enrollment Rate	Percentage of students in the graduation cohort who enroll in a two- or four-year postsecondary institution in the fall after graduating (NSC data)

Where Are They Now? Reports: 2011

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College Readiness Data And Research:
Next Steps

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College Readiness Data and Research: Next Steps

- **Create a place to house all of the data for both internal and external audiences, such as principals, teachers, school staff and parents**
  - A "one-stop shop" for school staff to access data on postsecondary outcomes for their school and students
  - Components can include data to support academic advisement, financial advisement and awareness of postsecondary options

- **Conduct trainings for school staff:**
  - Preparing students for college (both academically and financially)
  - How to use data on students' postsecondary outcomes to support change at the secondary school-level

- **Establish additional data exchange relationships or obtain other postsecondary-related data**
  - Data from USDOE's *FAFSA Completion Pilot Project*
  - Collaborate with additional higher educational institutions in your state (i.e. SUNY)