

# Self-Efficacy and Career Intention Changes Among Mentored Research Students

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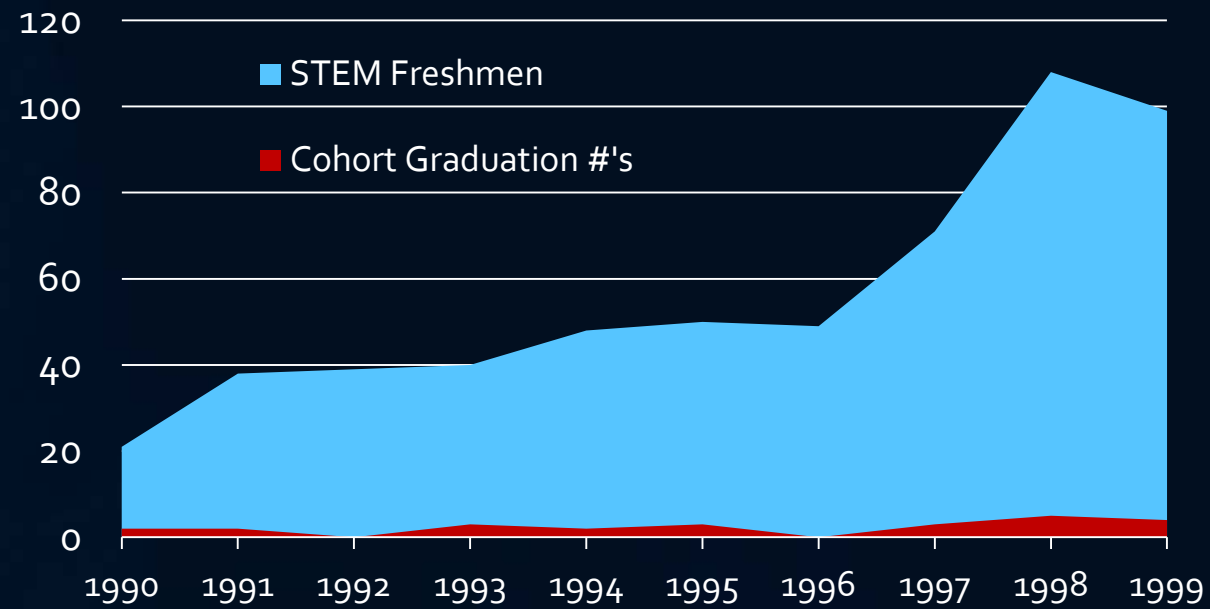
John Jay College, The City University of New York



# John Jay College - Population Descriptors

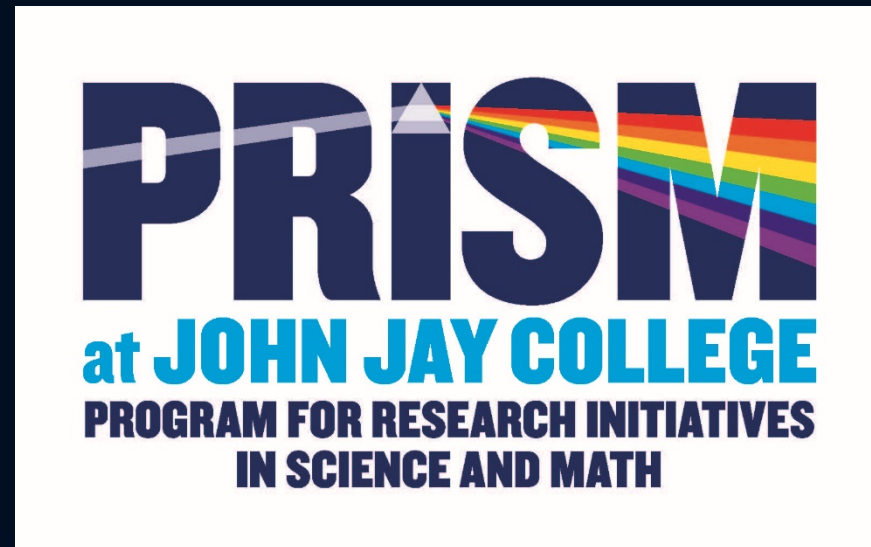
- Largest HSI in Northeast
- 63% Underrepresented
- 57% Female
- 61% First-Generation
- 79% Employed (54% FT)
- 13% Single Parents
- 67% Receive Financial Aid
- 50% Households earning <\$30,000

# Program History



# Research Mentoring

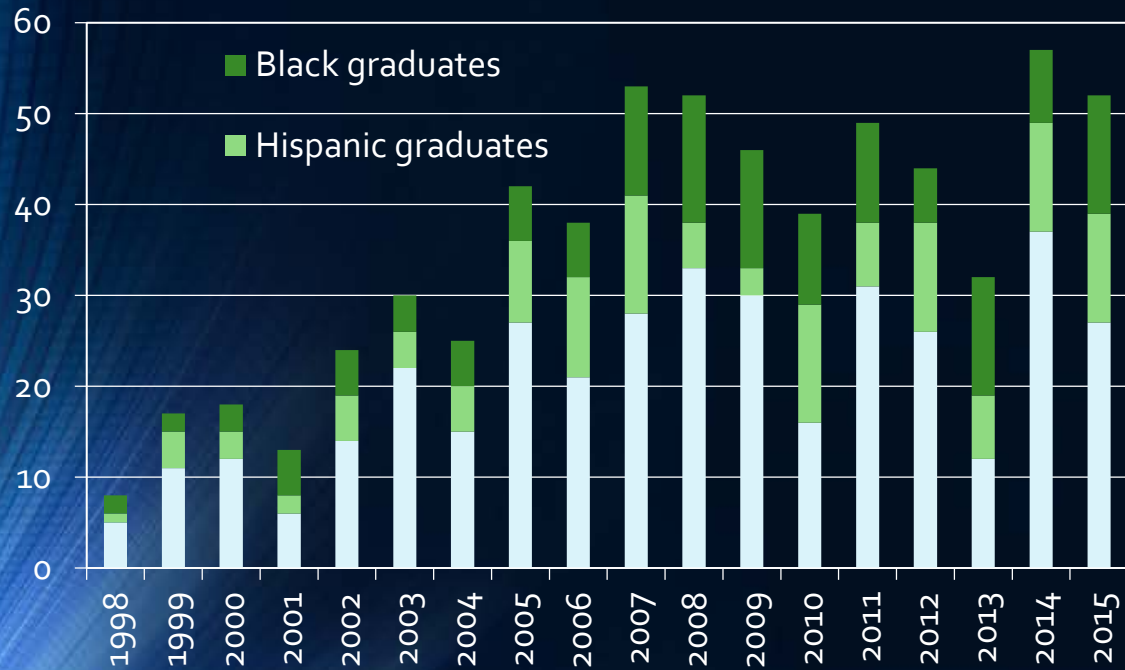
- Started early 2000's
- Intensive Research Training
- 2+ Years Mentoring
- Professional Development
- Stipends
- Conference Travel
- Research Supplies
- Symposia



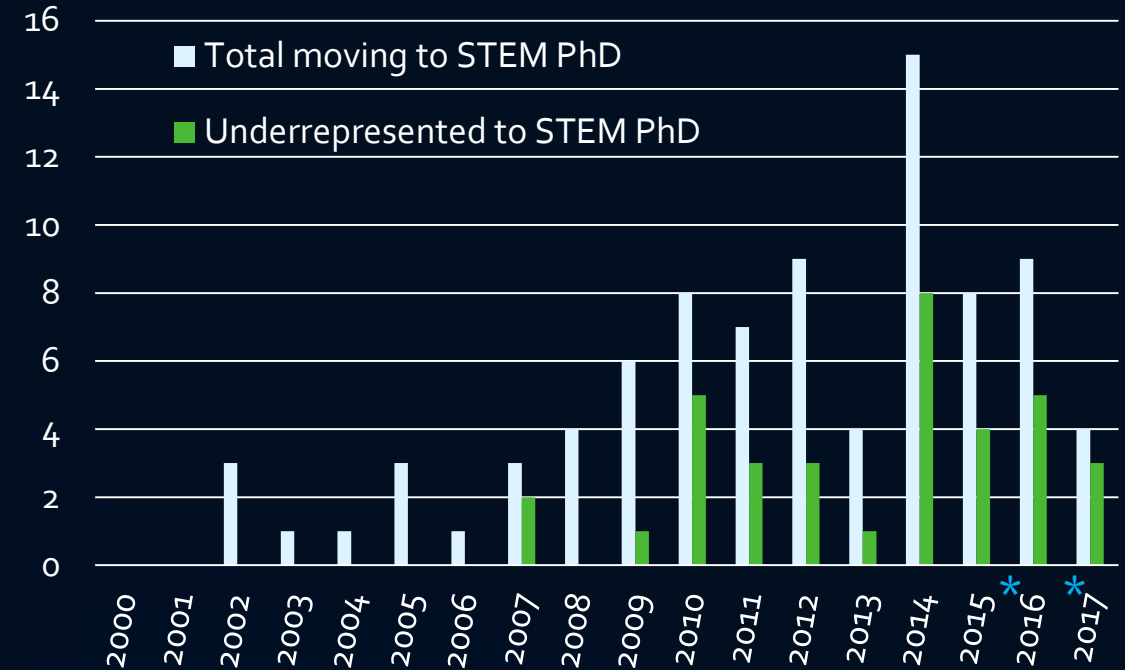
# Research on Mentoring

- Pre-Post Assessment of Critical Thinking Skills
- Pre-Post Assessment of Presentation and Scientific Process Skills

Graduation Rates



Post-Graduate Enrollments



PRISM

PRISM

JRST 54(2):169 (2017)

\* Preliminary

# Case Study Research

- Literature Question
- Social Cognitive Career Theory Framework
- Questionnaires and Interviews focused on: “How does participation in an URE affect students’ intentions to pursue research careers and/or post-graduate study, both overall and for students from URM groups?”
- Instrument Implementation:
  - Early Career (Bio 101)
  - Late Senior/Alumni
  - N = 47 completed both → 43% Black/Latin@, 64% female

# Post-Graduate Intentions

Female and male student intentions to attend STEM graduate school prior to and post participation in the PRISM undergraduate research program.

	No to No	Yes to Yes	No to Yes
Male (n=16)	4 (25%)	4 (25%)	8 (50%)
Female (n=29)	7 (24%)	7 (24%)	15 (52%)

Student intentions to attend STEM graduate school prior to and post participation in the PRISM undergraduate research program by race.

	No to No	Yes to Yes	No to Yes
Asian (n=6)	1 (16%)	3 (50%)	2 (33%)
Black (n=11)	3 (27%)	2 (18%)	6 (54%)
Hispanic (n=14)	2 (14%)	1 (7%)	11 (79%)
White (n=14)	5 (36%)	5 (36%)	4 (28%)

# Change Mechanisms

- “At one point, my mentor said that everything we had been doing had been to give me sense of a Ph.D., which I had never even considered. And I thought, ‘hmm, that’s cool.’”
- “Being the first in my family to attend college, I was very unaware of the many opportunities available in science. I had always thought that I’d graduate and get a job, but had no further plans for my career. It was [my mentor] who first introduced me to the idea of attending graduate school to further my education and gave me the confidence to pursue it.”
- “[Research] made me realize how much I loved being in the lab and that I could conduct research independently. I was also introduced to the idea of graduate school, something I hadn't previously considered.”



# Conclusions

- Impact on Intentions
- Institutional Paradigm Shift
- Capacity Building
  
- Acknowledgements
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# Theoretical Framework: Social Cognitive Career Theory

(Lent, Brown & Hackett, 1994)

