Noyce PI Summer Block Party

Noyce Track 4
Lessons Learned Panel

Moderator: Jack Butler, National Science Foundation

Panelists:

- Douglas Larkin, Montclair State University
- Gregory Rushton, Middle Tennessee State University

Studying the Retention of Novice Science Teachers by Learning from School District Induction and Mentoring Programs (IMPREST)

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IMPREST: Induction and Mentoring Programs for the Retention of Science Teachers

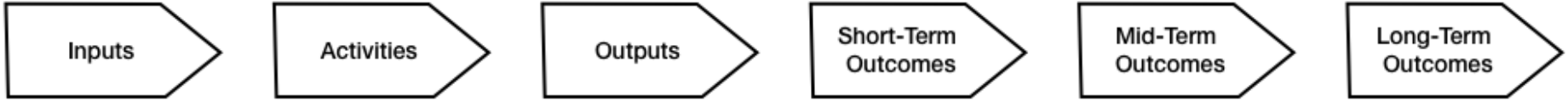
Goal: To identify school districts where science teachers are successfully being retained, and then go there and investigate why (5-6 per state). We focus on:

- Teachers in high-need schools
- Teachers of color
- Recipients of Noyce scholarships

Lessons Learned

- Startup took much longer than anticipated, mostly because I was asking new questions my university hadn't yet dealt with. (Aug→ Jan, Doc student tuition)
- Weekly Research Team meetings
- Advisory board meeting was very helpful
- Our project includes site visits, making contact and getting approved took much longer than anticipated
- Good to have parts of the project that operate independently (Instruments/IRB, data analysis, policy case studies, website: https://www.montclair.edu/imprest/)
- It's possible to stick to the logic model even if the plan changes (COVID-19)
- Our post-award facilitator is really helpful, particularly in moving funds around to deal with changes.

IMPREST Project Logic Model



What resources will be used to support the project?	What are the main things the project will do/provide?	How many and what sort of observable/ tangible results will be achieved?	What will occur as a direct result of the activities & outputs? (typically, changes in knowledge, skills, attitudes)	What results should follow from the initial outcomes? (typically changes in behavior, policies, practice)	What results should follow from the initial outcomes? (typically changes in broader conditions)
□ Montclair State University faculty □ NSF funding □ Doctoral students in the MSU Teacher Education and Teacher Development (TETD) Ph.D. program □ Database / visual basic consulting from the MSU computer science department □ Data resources from the State of New Jersey, the State of Pennsylvania, and the State of Wisconsin □ Data resources from the North Carolina Education Research Data Center	□ Perform a secondary data analysis of teacher retention data from four US States (NJ,NC, PA, WI) using a minimum 10 years of state staffing data. □ Identify top 5% (approx 15-20) districts per state that are successful in retaining science teachers (general population, high need schools, and teachers of color) □ Conduct 5-6 case studies per state of successful induction mentoring programs □ Track retention of Noyce scholars in targeted states, and compare with peer group.	• Research describing a deeper and more nuanced description of science teacher retention and turnover in targeted states and case studies in mentoring, induction and retention to be disseminated as conference papers (AERA, AAAS, NARST, NSTA), peer-reviewed journal articles, and a book. • Policy briefs for state and district policymakers concerning best practices in teacher mentoring and induction • Development and dissemination of a tool for any state to use to calculate actual retention rates from existing and future five-year staffing data sets. • A comparison of the retention rates of Noyce-funded scholars in targeted states as compared to their non-Noyce counterparts.	□ Stakeholders will have a researched-based set of best-practices to guide mentoring and retention efforts □ Cases of effective types of induction and mentoring necessary to retain science teachers of color, and science teachers in high need districts will be available as guides for best practice nationally. □ Doctoral students in the TETD Ph.D. program at MSU will be prepared to continue conducting research on teacher retention and induction program quality. □ State departments of education will be able to use the IMPREST retention tools to calculate actual retention rates. • Project team members will be better prepared to guide the design/implementation of induction programs through this research	• Higher quality mentoring and induction activity • Increased retention rates for science teachers generally, science teachers in high need schools, and science teachers of color. • Policy attention to 5-year retention rate (away from 1-year rate), and shifted view away from viewing induction support as solely one-to-one mentoring towards broader systems of support for new teachers □ State departments of education will use retention figures drawn from the IMPREST retention tools to inform policy decisions	• More favorable student outcomes for science learning from better mentored and more experienced teachers. • View of teacher education as initial preparation plus induction. • Adequate resources allocated to mentoring and induction by policymakers and stakeholders. • State policy impacts driven by actual five-year retention data across multiple US states.

NOYCE PI SUMMER BLOCK PARTY

Gregory Rushton

Director, Tennessee STEM Education Center
Professor of Chemistry
Middle Tennessee State University

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Q & A

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