Pathways to Prosperity: Building a Data-Driven Workforce

Institutionalizing Science & Technology Expertise Pipeline into State Government

Anna M. Dulencin, PhD
Eagleton Institute of Politics, Rutgers University
This session

1. Specific challenges in recruitment of highly-trained experts
2. Model mechanism in New Jersey
3. Examples from other states
4. Does it work?
5. What can you do
Specific challenges in recruitment of S&T professionals

Highest level of S&T expertise mostly reserved for research-based positions in executive branch

Need for highly trained experts is ubiquitous

Examples from legislature

Long hiring process

Political & government knowledge gap - absence of political science education in S&T curricula
Eagleton Science and Politics Fellowship

One year fellowship for PhD-level scientists, engineers and healthcare professionals to serve as full-time in-house science aides in legislative and executive offices.

- Full-time & In-house
- Prepare reports, analyze existing evidence, compare & contrast approaches, nation-wide landscape analysis of policy solutions, novel suggestions, etc.
- No financial cost to the host office
- Highly selective training opportunity
- Politically articulate scientists & engineers
- Science Fellows receive a competitive stipend, health benefits, and are supported by pre-placement intensive training, regular check-ins, professional development and communities of Institute, University, and larger networks

The Eagleton Science and Politics Fellows have become an indispensable resource for our office.

Their knowledge of science and the scientific process helps inform policy makers and directly influences the formation of policy.

The fact that policy fellows have been hired by the Legislature (or offered jobs) speaks to the caliber of the fellows and the success of the program.

NJ Senate Majority Office
Past Placements – Legislative Branch (9 Science Fellows)
Past Placements – Executive Branch (20 Science Fellows)

New Jersey Department of Agriculture
Department of Corrections
State of New Jersey Department of Education
Department of Environmental Protection
Board of Public Utilities
New Jersey Department of Banking and Insurance
New Jersey Department of Health
New Jersey Department of Children and Families
Human Services
ESPF Alumni Institutions & Backgrounds

Rutgers University
Temple University
Texas University
WPI
Princeton University
University of New Hampshire
Montclair State University
Wake Forest School of Medicine
University of Michigan
Brown University
University of Oxford
University of Utah
Johns Hopkins University
Arizona State University
University of Washington
Penn University
Einstein College of Medicine
Purdue University
Eagleton Science and Politics Fellowship - Background on Launch

Initial funds - California Council on Science and Technology Planning Grant

Champion – Assemblyman Andrew Zwicker (now Senator)

- PhD in physics
- Head of communications and public outreach at the Princeton Plasma Physics Laboratory
- Secured funds for 4 Science Fellows from NJ state budget

Institutional home & support

- Rutgers University/Eagleton Institute of Politics
- Previous work in the science & politics field
- 60+ history in administering state-level undergraduate and graduate fellowships
Similar Active Programs Across the U.S.
Similar Active Programs & Development Efforts Across the U.S.
DURING FELLOWSHIP (6 active programs)

217 Scientists & Engineers placed in state governments

76 Executive Offices

141 Legislative Offices (non-partisan, partisan, legislators' offices)
ROI

DURING FELLOWSHIP (6 active programs)

217 Scientists & Engineers placed in state governments

POST FELLOWSHIP
STFP Alumni working in state government

102 1 year after
74 Currently

76 Executive Offices
141 Legislative Offices (non-partisan, partisan, legislators’ offices)

69% STFP Alumni with policy-focused careers
ROI

DURING FELLOWSHIP

Median Cost Per Science Fellow in 5 Active Programs

$111,000

Salary, benefits, professional development

Administrative Costs
ROI

DURING FELLOWSHIP
Median Cost Per Science Fellow in 5 Active Programs

$111,000

Salary, benefits, professional development
Administrative Costs

POST FELLOWSHIP
Median Cost Per ESPF Alumni Working in NJ State Government

$153,000

Salary
Fringe

1st Year Cost per PhD-level scientist in NJ state government

$129K-$183K

Salary
Fringe
Opportunities to increase S&T experts in state governments

Groups across the US are looking for your support

Approach institutions & individuals you trust
  • Capacity to administer

State funding
  • Landscape analysis
  • Launch of fellowship

anna.dulencin@eagleton.rutgers.edu
ESPFL Alumni Careers

- Private Sector
- Education & Academia
- AAAS STPF
- Government Affairs
- NIH & National Academies
- Continued in placement office
Evaluation

How do we know if the scientists have increased evidence-based policymaking?

- Quantitative methods are challenging
  - Science Fellows are in different government branches & environments
  - Opportunities and outputs vary

- Qualitative & process evaluation
  - Mid-year questionnaire for Science Fellows and supervisors
  - End of year testimonials

- Career trajectory and Science Fellow retention
  - 7 out of 11 alumni have been retained
  - 2 are AAAS STPF fellows, 1 policy analyst at NIH, 1 program director at National Academies