Noyce Tracks 1-3 & Capacity Building Lessons Learned Panel

Moderator: Jack Butler, National Science Foundation

Panelists:

• Paige Evans, University of Houston
• Stephen Farenga, City University of New York, Queens College
• Sandy M. Philipose, Austin College
• Sharon Vestal, South Dakota State University
NSF Noyce Grant 1557309 (UH-LIFE)

University of Houston: Learning through Informal and Formal Experiences

- **Track 1: 2016 – 2021**
- Targets undergraduate STEM majors
- Provide paid summer internships
- Provide $12,000 scholarships to juniors and seniors
- Biology and Chemistry Inquiry Courses
- Goal: 40 preservice STEM teachers
Results!

- **80** • Unique Scholars Supported
- **49** • Teaching in High Need School Districts
- **6** • Start teaching Fall 2020
- **25** • Still in program
Noyce UH-LIFE Participants

- HISP, 48%
- White, 20%
- Black, 11%
- Asian, 20%
- Multi Racial, 1%

- 60% Female
- 40% Male
Summer Internships: STEM Camps

- Internship Institute
- Noyce Interns serve as camp counselors and teaching assistants in summer STEM camps
- Noyce Interns work alongside Noyce Graduates
Challenge: Summer Internship 2020

- Three week virtual STEM Camp
- Over 3,000 participants
- Four daily zoom classes ~1,000 daily participants
- Private Facebook Interaction
- Feedback via UHSTEM Email
- 31 Summer Internships
- Valuable experience developing and teaching online lessons
## Elements of Success

### Multi-Level Recruiting

1. STEM Faculty Ambassadors
2. Student Ambassadors Including Noyce Interns and Scholars
3. Classroom Visits
4. Recruitment Parties
5. Orientation and Registration Recruiting

### Community Building

1. Multi-layered Mentoring
   - A. Advisors
   - B. Faculty
   - C. Peer to Peer
2. Regional Noyce Conferences
3. Networking
4. Professional Development
5. Community Service
NSF Noyce Grant 1759454 (UH-LEAD)
Leading through Equity and Advocacy Development

Track 2: 2018 – 2024

30 Master Teacher Fellows

Masters Degree: STEM Education

10,000 Salary Supplements

Professional Development and Leadership: CRP

Policy Advocacy
Noyce UH-LEAD Participants

Cohort 1: 14 (27% Males)
- White: 36%
- HISP: 64%

Cohort 2: 16 (44% Males)
- White: 31%
- Black: 38%
- HISP: 25%
- American Indian: 6%
Challenge: Increasing Diversity

Targeted Recruiting

1. Looked at Demographics of Teachers and Students in Particular Schools

2. Advice on how to make recruiting materials more culturally responsive

MTF’s serve as Mentors for Noyce Track 1 Scholars

1. Mentors at Noyce Conferences

2. Mentor Teacher and Cooperating Teacher
Thank you!

Dr. Paige Evans
pevans@uh.edu
NOYCE SciTech Teacher Preparation Program
Preparation of STEM Majors and Recruitment of STEM Graduates to Increase the Number of Highly Qualified STEM Teachers
NSF Award#1557384
Active Involvement on Campus

Fully Integrated Science Education & Science Discipline Programs
Black Rock Forest Field Station

Active Involvement in the Field

Integrated Science Content GLOBE

Classroom Application
We want to know what change are you are going to cause in your learners? What is the transformation that you are attempting to accomplish?
Noyce Austin College STEM Education Leadership Scholars (Noyce ACSELS)

Support for this work was provided by the National Science Foundation’s Robert Noyce Teacher scholarship Program under Award No. 1660547.
Context: Austin College

- Small liberal arts institution in Sherman, Texas
- Approximately 1,400 students
- Strong undergraduate pre-med/STEM preparation
- Five-year Master of Arts in Teaching (MAT) program - Approximately 20 MAT candidates per year
Overview: Cross-Campus Preservice Teacher Leadership Preparation

• Marriage of two programs
• Existing STAR program and emerging LEAP program
• Preparation of STEM Teacher Leaders

Summer 2016: NSF Noyce Teacher Education Grant application submitted
Spring 2017: Grant awarded
Summer 2017: Implementation began
Spring 2020: Moving into analyzing, applying, and sharing learnings
Tutoring
Help local STEM students in high schools and middle schools
Multiple opportunities available including being a teachers aide, a lab TA, or a traditional tutor working one-on-one with a student
$12 per hour

Jan-Term Class
Better understand STEM education
Plan and implement hands-on STEM lesson plans in local elementary schools
Service learning opportunity

Summer Internship
Work in museums, foundations, or local programs with STEM activities
Develop leadership skills
Get Paid $4,000 for 8 weeks

Scholarships
Become a STEM Teacher
$25,000 for senior year
$40,000 for Masters of Education in the ATP program at Austin College
2 years of service commitment in a high needs district for each year of support

Noyce ACSELS Program at Austin College
Improving the quality and leadership skills of STEM Teachers

Better understand STEM education
Plan and implement hands-on STEM lesson plans in local elementary schools
Service learning opportunity

Get Paid $4,000 for 8 weeks

Become a STEM Teacher
$25,000 for senior year
$40,000 for Masters of Education in the ATP program at Austin College
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Supports

• Strong partnership between STEM faculty and Education faculty
  • Tutoring, Internship, Scholarships, Jan-Term Class
  • Integrate our strengths

• Having a strong focus on teacher leadership and AAUP rubrics on leadership behaviors such as collaboration and communication
  • Guided proposal, implementation, and now evaluation and dissemination efforts

• Institutional support through the grants office/staff members
  • Size supported quick decision-making
Navigating Challenges

• Aligning/Revising grant initiatives to needs of scholars and local partners
  • Mentor initiative
  • Tutoring initiative

• Implementing a 5-year grant amidst other changes at the institution
  • Leadership changes
  • Staffing/faculty shifts

• Creating the grant “infrastructure” across the college
  • Promissory notes (Business Office, Financial Aid)
Description of STAR program:


[Website](#)

[Video](#)

[Instructional Collection](#)

[AACU Rubrics](#)
Contact Information:

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903-813-2455
Lessons Learned Panel: Noyce Block Party

Dr. Sharon Vestal
South Dakota State University
Rural Enhancement of Mathematics And Science Teachers

First Noyce grant in 2007, NSF DUE-0733691; Phase II Noyce grant in 2014, NSF DUE-1439789 New Track I Noyce grant in 2019, NSF DUE-1950255
# REMAST by the Numbers July 2020

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
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<tbody>
<tr>
<td>Total amount awarded to SDSU students</td>
<td>$980,000</td>
</tr>
<tr>
<td>Total cancelled through service (teaching)</td>
<td>$740,000</td>
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<tr>
<td>Total teachers produced</td>
<td>61</td>
</tr>
<tr>
<td>Total teachers planning to teach 2020-2021</td>
<td>45</td>
</tr>
<tr>
<td>REMAST Teacher Retention Rate</td>
<td>73.77%</td>
</tr>
<tr>
<td>Total years of teaching experience by ALL REMAST alumni</td>
<td>307</td>
</tr>
<tr>
<td>Number of alumni still involved in education</td>
<td>3</td>
</tr>
<tr>
<td>Number of alumni in graduate school full-time</td>
<td>3</td>
</tr>
</tbody>
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This project has been funded by NSF DUE-0733691, NSF DUE-1439789, & NSF DUE-1950255.
Highlights of our program

• Annual summer conference with alumni, scholars, and a national speaker;
• Facebook group;
• Pre-service mentoring—book study, paired with faculty mentor.

This project has been funded by NSF DUE-0733691, NSF DUE-1439789, & NSF DUE-1950255.
Unique Conference Events

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Quote from Denis Sheeran, author of *Instant Relevance* & keynote speaker

Attending the REMAST conference was the highlight of my summer. Spending time among motivated, innovative young teachers developing their curiosity together while being immediately accepted into their REMAST family was such a rewarding experience for me. REMAST models the support system new STEM teachers across the country should have.
Responses to the primary reason I come to the REMAST conference is to maintain connection with the REMAST staff and other REMAST Scholars.

• **It is such a privilege to be able to return each year and see friends and professors from college. This opportunity is so rare for others, and I am very thankful to be able to do this.** Getting to see everyone each year is the number one reason why I attend. We have formed our own little REMAST family, and we are so lucky to have friends and professors we can trust and rely on not just during the conference but during the entire year. I truly love this program.

• **Since I'm still in school this is a good way for me to connect with current teachers without being overwhelmed.** I already have something in common with them so I don't feel like they are going to judge me or give me false ideas. It is also nice to have people already in the field that I would feel comfortable asking questions to or going to for resources.

This project has been funded by NSF DUE-0733691, NSF DUE-1439789, & NSF DUE- 1950255.
Lessons Learned in our program

• Work with the Loan Collections office before you hand out any scholarships; it is likely that they have a certain way that they want you to track scholarship disbursement.
• Work closely with Financial Aid and Scholarship office.
• Get a non-school email address from your alumni before they graduate.
• Make an effort to stay in touch with your alumni—you may think that they aren’t reading your emails or FB posts, but many of them are.
Q & A
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