VOLUME 4 QUARTER 4

NANOGrav-PIRE

SmartStart Evaluation Newsletter

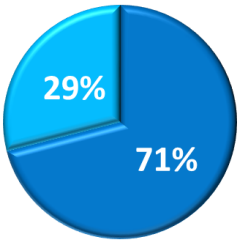
AUGUST 2014

This newsletter provides an overview of PIRE project participants, activities, and progress on the five project goals.

PROJECT GOALS

Goal 1: **Knowledge**
Goal 2: **Education**
Goal 3: **Partnerships**
Goal 4: **Institutional Capacity**
Goal 5: **Workforce Development**

PIRE Participants

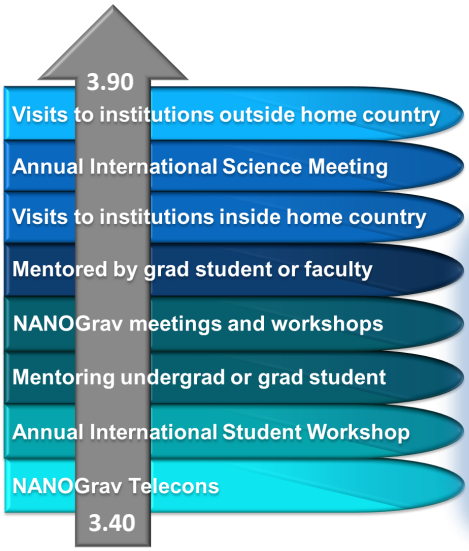


- Females are more likely to be **undergraduate** and **graduate students**
- Although **more females are joining the project each year**, the proportion of males to females has remained the same.

Usefulness of Project Components

› All activities rated *very useful*

On the annual post-survey, participants rated the following activities on a scale of 1-4; 1=*not useful at all*, 4=*very useful*.



Findings:

- 90% reported **visits outside the country** were *very useful*
- Lowest rated activity was the **NANOGrav Telecons**

"Ask ourselves...

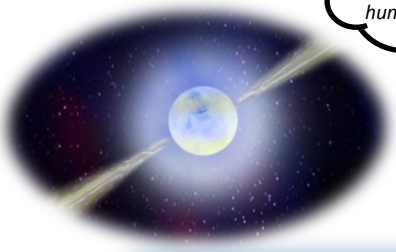
"...what would have to happen (in the telecon) for people to really feel connected when they hung up ."

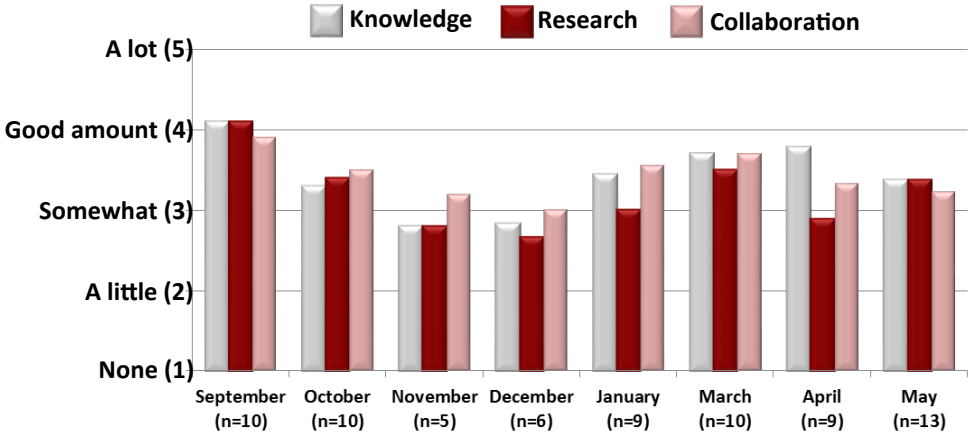
Science Seminar Series

› *Somewhat* to a *good amount* of impact

Each month participants rate, on a 5-point scale from 1=*none* to 5=*a lot*, the extent to which the seminar impacted them in each of the following areas:

- Increased knowledge about astrophysics-related topics
- Increased ability to conduct research in their scientific field
- Increased sense of collaboration with other scientists





Findings:

Highest impact across time:

- increased sense of collaboration, average rating of 3.43
- increased knowledge, 3.42

Both areas had a *good amount* of impact this project year

Lowest impact over time:

- increased ability to conduct research

Mean ratings of impact between *somewhat* and a *good amount*

SmartStart Evaluation and Research

Achievement of Project Goals

› All goals met or on track to be met

Post mean rating

2013-14 (n=94)

Participants rate themselves in each PIRE goal area on the baseline and post-survey. Ratings range from 1-4, 1=*strongly disagree*, 4=*strongly agree.* Mean scores are compared using paired samples t-tests to assess participants' growth over the course of the project.

Areas of great impact

Opportunities for more impact

$p < .05$ (*)

$p < .001$ (**)

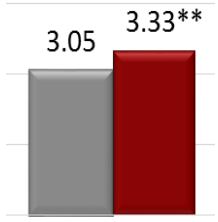
Pre Post

Goal 1—Knowledge Findings:

- Participants' overall knowledge of astrophysics increased significantly.
- Ratings by postdocs/graduate students and undergraduate students increased the most.

Collaborations with scientists from other countries have increased my scientific knowledge. **3.64**

Collaborations with specialists in scientific fields other than my own have increased my ability to make scientific discoveries. **3.15**

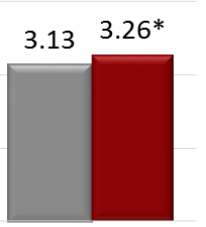


Goal 2—Education Findings:

- For the first time participants demonstrated overall significant gains.
- Faculty/senior researchers continue to have the most opportunities to present and publish work.

I am comfortable collaborating on scientific projects with researchers from a variety of countries. **3.62**

I am comfortable trying to speak in a foreign language to communicate with other people. **2.74**

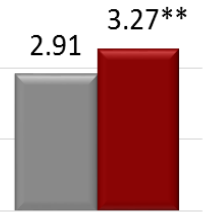


Goal 3—Partnerships Findings:

- Overall significant gains.
- At baseline, 91% of undergraduates *disagreed* to establishing partnerships. At post, 82% *agreed* or *strongly agreed.*
- Total # of visits to other institutions has almost tripled since last year.

I have collaborative research partnerships with scientists from countries other than the country in which I live. **3.55**

International scientific researchers visit my institution to collaborate on research projects with me. **2.97**

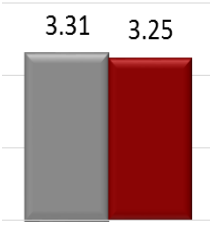


Goal 4—Institutional Capacity:

- No overall significant gains.
- Grant proposal submissions have increased from the previous year.
- This goal is shifting away from university capacity and towards NANOGrav capacity.

My institution recognizes the benefit of encouraging its students and faculty to collaborate with researchers at international institutions. **3.38**

My institution is flexible in its policies on sharing scientific research, intellectual property, and patents with international institutions. **3.10**

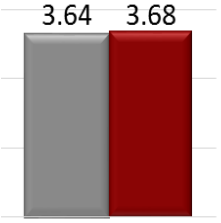


Goal 5—Workforce Development:

- No overall significant gains.
- More participants rated each statement higher this year of the project than last year.
- On both baseline and post-surveys, goal 5 received the highest ratings.

I believe my country will benefit from providing opportunities for its scientists to be globally engaged. **3.75**

I would consider living and conducting research in another country for one or two years. **3.52**



Recommendations

- Continue to recruit females and underrepresented minority involvement, especially in higher positions.
- Focus on improving telecon engagement, developing a streamlined process for student advising and research abroad, and accessibility to the annual meeting (i.e. funding, logistics).
- **Goal 1:** Support international collaboration between students and faculty and offer introductory training to increase knowledge of global perspectives.
- **Goal 2:** Encourage learning basic language before going abroad.
- **Goal 3:** Identify ways foreign participants may visit U.S. institutions and increase overall visits to other countries for collaborative research projects.
- **Goal 4:** As this goal is revised, use the Organizational Capacity Assessment Tool (OCAT) to develop NANOGrav institutional capacity.
- **Goal 5:** Leaders should develop strategic planning for outreach and training in areas that need improvement.

Upcoming Evaluation Activities

- Report results of annual IPTA meeting in Banff, Canada.
- Conduct post-IDI of Research Abroad Experience (RAE) students.
- Conduct interviews with research abroad mentors.

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