The SOARS Program
Tools for longitudinal participant tracking and evaluating program impact
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The Goal
While there is widespread agreement about the need to diversify the atmospheric sciences, there has been little coordinated effort to track the progress of students beyond summative statistics. Coordinated tracking would enhance diversity efforts by facilitating student transition between programs, guiding programmatic improvement, and identifying gaps in the overall effort.[1]

The SOARS Program
The mission of SOARS is to broaden participation in the atmospheric sciences by engaging students from groups historically under-represented in science, including Black or African-American, American Indian or Alaska Native, Hispanic or Latino, female, first-generation college students and students with disabilities. SOARS welcomes LGBT students.

SOARS is a multi-year undergraduate-to-graduate bridge program that centers on summer research experience, multifaceted mentoring, and a strong learning community.

A Mix of Evaluative Tools and Strategies

Data tracking of career paths and degrees
A key way to estimate the influence of SOARS is to look at the success of our protégés in graduate school and beyond. SOARS devotes staff time to tracking protégés and alumni through:

- Reaching out to current and past participants twice a year.
- Tracking contact information, progress in school and career path.

As a result, SOARS possesses accurate information about almost all of our protégés and alumni since the beginning of the program.

Tracking of scientific contributions
Another way to measure program success is to look at the impact protégés have had on the field. Protégés have contributed 30 refereed, co-authored papers from their summer research, and presented 77 oral and 240 poster presentations at regional and national conferences while in SOARS.

Individual Narratives
In addition to document career paths, it is important to document individual narratives. Individual narratives capture the richness of each student's story and achievement and guides program improvement. SOARS maintains profiles for each protégé and alumni and shares them with new program participants, mentors and funders.

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Talea uses an Advanced Coastal Circulation and Storm Surge Model to understand hurricane storm surge. She is a NSF Graduate Research Fellowship recipient.

External Evaluation
In 2005, the Ethnography & Evaluation Research group at the University of Colorado at Boulder completed a two-year, in-depth evaluation of the SOARS program. Their main findings were published in 2010. [3]. The evaluation interviewed every participant in the on-year history of the program, as well as every mentor and all program staff.

The evaluation found the following factors as important to protégé success:[4]:

- research project,
- multiple, collegial mentors,
- support for protégés' professional development,
- a peer community,
- sustained engagement and financial support,
- holistic support of protégés,
- protégé integration into positions of leadership within SOARS,
- strong institutional support at all levels,
- and prestige of the hosting institution.

Alumni Network
SOARS benefits from a strong alumni network. SOARS alumni stay in contact by serving on the SOARS steering committee, giving seminars in the summer, volunteering as science or writing mentors to new protégés, writing for our newsletter, volunteering at outreach events. Many alumni support each other in career moves or simply as friends.

Citations

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