



NEVADA EPSCoR



NEXUS PROJECT

SMARTSTART EVALUATION NEWSLETTER

VOLUME 1 QUARTER 4

JULY 2014

PROJECT COMPONENTS

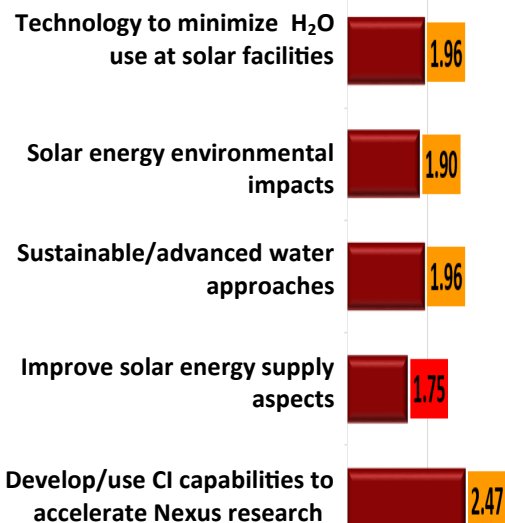
- Solar Energy-Water-Environment Nexus Research (Goal 1)
- Diversity (Goal 2)
- Workforce Development (Goal 3)
- External Engagement (Goal 4)
- Cyberinfrastructure Development

The baseline/annual post survey will assess:

- Quality of project implementation.
- Participant knowledge in each of the four goal areas.
- Impacts on the academic and scientific community and Nevada.
- Collaboration within and across components.

Mean knowledge ratings for Goal 1: Research knowledge

Ratings: 1=no knowledge; 5=great knowledge

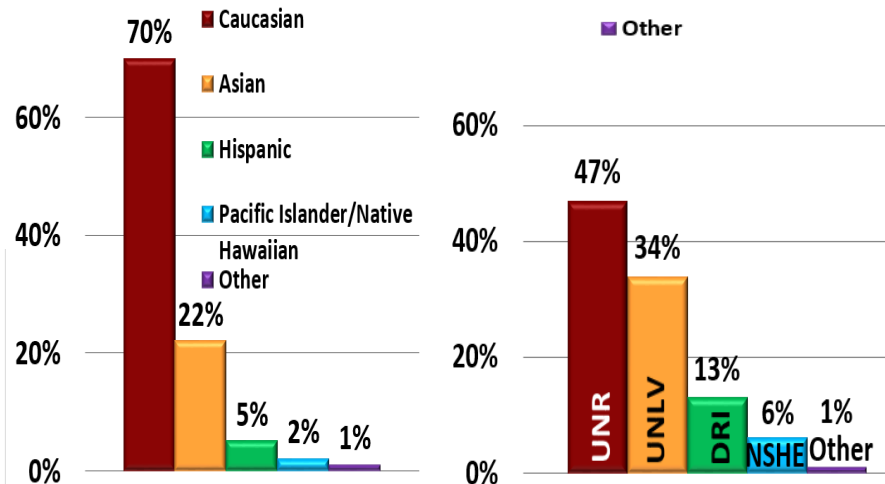
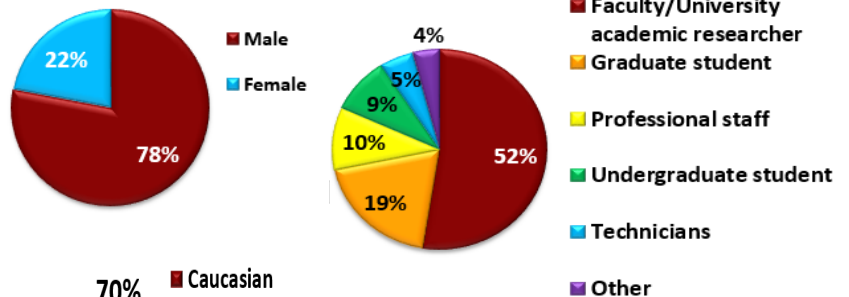


n=86
(95%
response
rate)

This newsletter presents results of the Baseline Survey, Academic Year UROP program, Student Mentoring, and K-12 Teacher Professional Development.

2013-14 Nevada EPSCoR Baseline Survey Results

The survey measures three main areas: demographics, Nexus project content knowledge, and level of involvement in Nexus activities.



Baseline Findings

- **Nexus Research (Goal 1):** Most objectives showed project participant knowledge levels at *slightly knowledgeable*.
- **Diversity (Goal 2):** 1/3 of project participants supported strategies that recruited and retained females, URMs, and 1st generation college students.
- **Workforce Development (Goal 3):** 1/3 of project participants mentor undergraduate students and 1/3 contact undergraduate students with information about opportunities.
- **External Engagement (Goal 4):** 24% of project participants contribute to media communications in efforts to increase public knowledge of Nexus.
- **Cyberinfrastructure Development:** Participants reported being *slightly knowledgeable*.

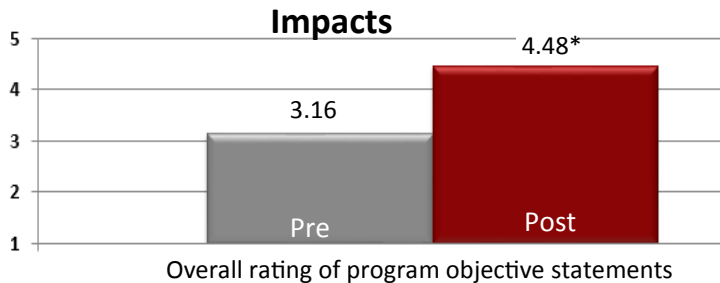
Baseline Recommendations

- Recruit female and URM faculty and students.
- Provide opportunities for participants to increase their knowledge about Nexus topics.
- Increase involvement in Diversity and Workforce Development recruiting and programs.
- Outreach to stakeholders to build community support/involvement for Nexus programs and goals.

Academic Year Undergraduate Research Opportunity Program (UROP)

Objectives

- Increase awareness among faculty/students of undergraduate research opportunities.
- Competitively allocate undergraduate research awards.
- Provide opportunities for undergraduates to present research.

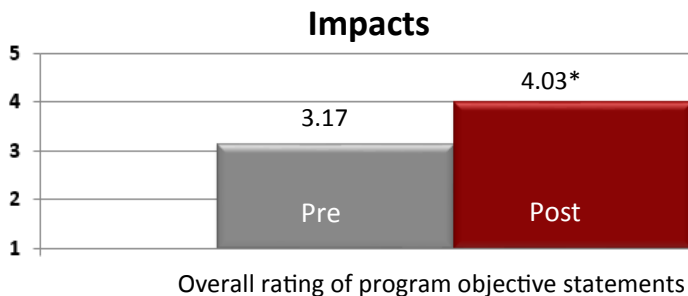


Nexus K-12 Teacher Professional Development

Grade 6-12 teachers attend professional development to create Nexus-related curriculum/materials.

Objectives-To increase:

- Ability to collaborate with other teachers.
- Ability to embed technology in lessons.
- Ability to develop curriculum and lesson plans.
- Ability to provide inquiry-based instruction.
- Ability to align curricular materials with state standards.
- Knowledge of the Nexus project.



Findings

- Sessions rated **very or extremely useful**.
- **Statistically significant gains** for three of six objectives.

Recommendations

- Recruit more female and underrepresented teachers.
- Provide agenda with program objectives and daily schedule prior to workshop.

UROP provides research and mentoring opportunities to undergraduates during the academic year.



Findings

- Sessions rated **extremely useful**.
- **Statistically significant gains** for all program objectives.



UROP Recommendations

- Target recruitment efforts towards underrepresented groups and females.
- Link research to real-life situations.
- Recruit undeclared students to provide information about STEM majors.

Student Mentoring

Background: In Spring 2014, two undergraduate students were mentored by a Nexus faculty member.



Findings: Both students found their experience *extremely valuable*.

Recommendation: Formalize student mentoring making it a Nexus project activity, involving additional Nexus faculty.



Overall Project

Key Findings and Recommendations



- Increase collaboration and knowledge sharing between science and cyberinfrastructure and other components.
- Encourage increased support, interaction, and participation across all project components.
- All project participants should work towards increasing project diversity.

Upcoming Evaluation Activities

- **NERDS** (Nevada Educators Really Doing Solar)
- **Summer UROP** (Undergraduate Research Opportunity Program)
- **GEAR UP** (Gaining Early Awareness and Readiness for Undergraduate Programs) Peer Mentoring
- **CUR** (Council on Undergraduate Research) Symposium
- **IWGs** (Innovation Working Groups)



SMARTSTART
EVALUATION AND RESEARCH