

GEO REU Workshop 2016

Working group: Recruiting and supporting students from tribal colleges and universities

10:30-11:30 am - Thursday, Sept. 22, 2016

Leaders: Diana Dalbotten, Sen Chaio

This is from a small working group of workshop participants who discussed the topic and made notes on their discussion.

Goals

- Suggestions for recruiting (many not too successful)
- Connecting with tribal colleges
- Better ways to support tribal students, incl housing issues and place-based needs

Challenges (barriers, as per Diana)

- A lot of parents (40+ %)
 - Support on reservation and have research on reservation
 - Struggle for housing
- A lot of opportunities available on campus, so how do we be attractive to these students? What are we looking for? Measures of success? Many not grad-ready so grad school may not be a good measure of success.
- What sorts of training are particularly valuable for mentors?
- For very early students (high school, cc) who haven't yet declared where they're going, are we likely to have a fall in number of students going into GEO rather than STEM more broadly?
- Challenges with minors (need chaperones), mixing between very young students and older ones can be challenging.

Solutions and strategies

- Connecting with programs that already exist to connect students to other research - be the next place these students can go to next
- Getting graduate school resourcing involved so there is more pathway between REU and grad school (sometimes have funding available); other groups who may have shared interest in recruiting Native American students. (May also provide professional development opportunities for all internship programs)
- Snowballing effect - once they're familiar with the program, they come back and share experiences (Diana gets more than she can take)
- Bring in more than one native student at a time, or provide a native mentor (potential source through other programs on campus; maybe graduate students on campus) - different tribal identities not too important.
- Clearly respecting native traditions, environmental connections
- Clearly stating "we welcome students with families to apply, we welcome veterans to apply, we welcome diverse backgrounds". Be clear about if you take freshman, or sophomores etc.
- Make connections on campus or at AISES etc; more effective than bulletin boards. Ideally have an introduction. Important to build ongoing relationships. If you can have an alumni student talk about the experience or take you with them, that is extra powerful.
- Keep list of recommendation letter writers asking them to share your opportunities.
- Training for mentors (and incentive)
 - Connect mentor with faculty mentor at college.

- Encourage PIs to identify if grad students might also be mentors; include them in all
 - Have a mentor information session;
 - Call it training for grad students in order to get faculty involved
- Be very careful with selection of mentors. Emeritus professors may be a good match for very young students.
- Meet with students individually for check in, go back to faculty individually as needed.
- Native American students very respectful of elders so tend to be very quiet and may not speak up; more likely to walk away than come forward with needs. (Often things going on in background - lots of trauma going on at home, family, etc...)
- Desire for research that is relevant to culture, so if you can help them connect it back to it. In Diana's program, reservation determines research and mentoring/projects support it (particular for REU on reservation). Some faculty are particularly interested in working with tribal-related research/students, perhaps applying for CAREER grant etc...
- Research relating to reservation helps with connecting back to their heritage, elders etc (perhaps justify being away).
- Tribal college students feel culture is under threat, and often want to not leave that behind - any opening to connect with that can help recruit, feel welcome.
- Shelley had a great experience with a mentor working with horticultural researcher; after some experience with genotyping, student proposed a project to look at the heritage apples on her campus that no one knew what were. Very successful; also allowed her to do some work at home, some at REU.
- Start small - get to know one college, don't be afraid to ask what they need etc. You don't have to have it all worked out.
- Sometimes you hear about people who have one bad experience and then "give up" on working with Native American students. Be aware that there are extra challenges, but don't jump to a conclusion of whole sub group.
- Diana said it's quite hard to connect with students who are not on Tribal college campuses, because the pockets are very small. Use Geoscience Alliance as a resource to help find them.
- Should there be an REU presence at AISES? Diana there; perhaps we should put a GEO REU presence at AISES? Put up big banner that says you have summer research opportunities!
- Not too many geoscience programs at tribal colleges. Be open to all STEM, biggest pool is in biology but you can tap into them with interest in environmental science.
- Tribal Colleges and Universities Program (TCUP): Money specifically for tribal college for faculty development and new programs; may need to get funding for partner organizations to work with TCUP. TCUP may have limitation that it keeps students/faculty specifically on campus doing native-focused work rather than tapping into the diversity of working with students from lots of places etc. Challenge for small college to manage a large grant like TCUP.
- Growth opportunity as STEM programs, particularly environmental, being offered in more and more colleges.
- For programs willing to take first years, look for "gen ed" majors (who don't know what they want to declare as major yet).

Resources

- Huge body of literature on traditional knowledge and how to work with native students, communities etc, eg Laurie Lambert
 - Includes a lot of best practices for how to do work with traditional knowledges

- Check out American Indigenous Research Association; has an annual conference
- Geoscience Alliance - cohort, connection, good source of connection.
- AIHEC website - has map of every tribal college in connection and information about all of them (37, concentrated in several states in north and northwest)
- GSA has a list of which programs have geoscience programs - Talia can share.
- [Braiding Sweetgrass](#) by Rachel Wall Kimmerer - good book about incorporating science and native knowledge
- AISES - very family friendly, connect with science fair for K-12

Additional thoughts/materials

- We should pay Diana to visit tribal colleges recruiting for us all :-)
- Should there be an REU presence at AISES? Diana there; perhaps we should put a GEO REU presence at AISES? Put up big banner that says you have summer research opportunities!