

The ABC's of Reporting: Student Success & Faculty Development

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Enhancing Research Capacity: Infrastructure Development at a PUI

WestCore

western south dakota dna core facility

“Innovative”

- Located at BHSU, 450 miles west of the lead institution, and more than 375 miles from the next closest partner PUI.
- Designated in 2004 as the network’s DNA Sequencing and Genotyping core facility.
- Has changed the culture of this institution to one that values and supports research in all areas.

Enhancing Research Capacity: Infrastructure Development at a PUI



Services

- Fragment Analysis
- Sanger DNA Sequencing
- NextGen Sequencing on Illumina MiSeq
 - Small Genome Sequencing
 - 16S Metagenome Sequencing
 - Transcriptome Sequencing
- Training students & faculty

INBRE Purpose Related to Student Training

- Provide hands on research experiences for participating students
- Provide mentoring & career development for participating students
- Serve as a pipeline to health research careers

Metrics to Illustrate Impact on Students

Who are your student users?

Where are they coming to you from?

- Mentored Research
 - Undergraduate Research Fellows
 - Graduate Students
- Training Programs
 - Work-study/volunteer lab assistants
 - Workshops or mini-courses
 - Course assistance

Metrics to Illustrate Impact on Students

- Number of student users
- Graduation rates
 - Post-graduate school attendance
 - Employment in biomedical professional, research or related field in-state, or out of state

Metrics to Illustrate Impact on Students

- Presentations
- Inclusion on publications
- Awards
- Anecdotal information – conversations, notes/e-mails

'.....I was awarded an NSF Graduate Research Fellowship yesterday! There were over 14,000 applicants this year and only 2,000 were awarded.....I wanted to let you know that for my NSF GRF application, I heavily emphasized the invaluable experiences I had with SD BRIN and how SD BRIN provided me the opportunities (research design, dissemination, etc.) to help prepare me for a future in scientific research.....all of the reviewers were impressed with all of the research experiences, and they also liked how I presented my research at a variety of scientific venues.'

How are Student Metrics Tracked?

- Challenge
 - Students move on - out of labs, and off campus
- Student data sheets - collect with lab & safety training
- Collection of abstracts
- Meet with the students as cohort groups (Food helps!)



INBRE Purpose Related to Faculty Development

- Increase the capacity to *do* research
- Develop areas of potential research
- Provide access to research resources
- Provide training for faculty development

Metrics to Illustrate Impact on Faculty Development

- Pilot projects
 - How has your core pulled network researchers together?
 - Grant proposal submission/awards
 - Presentations or publications
 - What new skills have faculty learned

Metrics to Illustrate Impact on Faculty Development

- Funded research projects
 - Publications/presentations
 - Grant goals met
 - New grant proposals submitted

Metrics to Illustrate Impact on Faculty Development

- Faculty mentoring students
 - Link data associated with services to students *and* their faculty mentors
- Faculty incorporating research into classrooms
 - Curriculum development?
 - Services rendered for courses?

Metrics Related to Outreach

- Outreach activities
 - Expose community to research activities by developing informal science education events
- Workshops
 - K-12 students
 - K-12 teachers



For Discussion

- What other metrics do you track?
- What are the challenges you face when gathering data?
- What solutions work for you?