Building Connections to Expand Arizona’s Bioscience Education

Collateral Institutions: Investments/Returns

University of Arizona (U.A.) NSF Grant
• U.A. professors do bacterial genomics research in high school (HS) DE classes
• Teachers receive $2,000/yr for lab supplies
• Teachers receive grad course credit tuition free

Mesa College (MCC) NSF Grant
• Provides a mobile biotech lab to HS’s
• Provides teacher training/mentoring

USDA/ARS – Arid Lands Agriculture Research Center (ALARC)
• Provides student & teacher internships / ARS Community Service
• Provides guided tours for bioscience students / promotes ARS research & community involvement

High School Benefits

Supplies & Support
• Funds biotech lab equipment
• Lab supplies
• Science tech lab support

Faculty Professional Development
• Biotechnology workshops
• Tuition reimbursement
• Become community college certified
• Research internships

Promoting Teacher Cooperation
• eUBET acts as a 3rd party to negotiate space & supplies with teachers; promote cooperation; & overcome competition in science departments

USDA eUBET Grant

Student Dividends

Course Variety
• HS students choose from nine different college biotechnology courses.
• In addition, 6 college science courses are offered to augment the biosciences.

Science Fairs
• Initiated in two high schools.
• Expanded in three high schools.
• Students from 9 schools entered Arizona Science & Engineering Fair (AzSEF)

Graduation & Transfer
• 93% percent graduated high school & plan to transfer to college
• Five student research internships
• 236 college scholarship recipients
• 43 university scholarship recipients

Students Demographics
• 18%, Spanish is their primary language.
• 36% are Spanish/Hispanic; 6% African Am.
• Average 4-5 family members; 32%, low SES
• 32% 1st in family in college; 59% female

Future Considerations

Construct a science & engineering academy (grades 7-12) on a HS campus; Jointly operated by HS, college, university, & ALARC

Survey Results Indicate:
• Teachers and Students value: Labs/lab technicians, lab equipment, dual enrollment.
• Barriers to Bioscience growth: Local school budgets, HS scheduling, lab availability

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