Overview of 5 Years of EPSCoR Funding

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This outreach initiative has had several distinct parts. Specifically the effort has focused on improving mathematics and science skills among the Native American students in the states reservation schools and tribal colleges. The initiative began over 5 years ago and the primary focus at that time was infrastructure building; it was important to interface with Native American administrators as an initial effort before any other additional activities could be developed. Several successful initial meetings took place and it became quickly possible to contact any administrator and receive a response. This type of relationship building is a key reason for the success of the program.

The motivation of students is a second part of the program. Activities that involved 5th and 6th grade students were developed, particularly Aeronautics Day, a field trip, at the Sioux City Airport. Industry sponsors were the FAA, the 185 Fighter Wing of the Iowa Air Guard, the Sioux City Airport Authority, and JetSun Aviation. These same sponsors continue today and total close to 1,000 5th and 6th grade students have taken the field trip. In addition, library and technology enhancements at several schools and college were awarded as well as several scholarships.

Another part of the program has been the development of curriculum to include aeronautical units. The initial goal that this was accomplished was by sending teachers to NASA sponsored workshops. A total of 14 teachers have attended one-week and two-week sessions, with the two-week sessions at NASA Ames. The teachers then have come back to their classrooms, developed implementation plans, and begun to use airplane and rockets as part of the regular science curriculum in upper elementary.

The signature activity that has moved to program from just a small bit of academic involvement in teaching science to a community-based activity has been Family Science Nights. Begun as a demonstration project at Santee Schools, the core idea is that students and their parents will attend evening school sessions that include joint activities based on science in which parents and children are joint participants. At this time 3 of the target schools have programs in place with the last of the schools to start with term. There has been active participation by students as well as parents and we are beginning to see many problems like school attendance, attention in class, and better grades overall take place. Although this is just an initial reading on the results, it is expected that this activity will continue to thrive.

We have worked with the two tribal colleges on a limited basis so far since we are attempting to develop the feeder program in mathematics and science in the lower grades first. However, these schools have not been ignored and a great deal of developmental activity is underway. This activity includes teacher fellowships, faculty development workshops, technology and library enhancements and focus group sessions. During the next few years, improvement of math and science facilities and equipment at these schools is a high priority.

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