

## Educational Awareness: Grant Proposal for Science & Engineering Technical Institute

This was a group assignment given in SED 610 to investigate how a teacher, group of teachers, school or district can tap into grant resources. As a writing project, this required Hugh Smith, Jonathan Abrams, and I to coordinate research and writing to adequately state our problem, specific methods and objectives, and the population we have chosen to serve with the grant proposal. Our group sought to address the need to get more young adults pursuing science and technology occupations better prepared and to meet regional occupational demands.

During initial group discussions, we tried to find issues in education to address that we all would have in common. Both technology and computer aided design turned out to be the two issues we all could agree on to address. Our choices drew upon each of our skills as technologist, teacher, and industrial manufacturer. We then turned our attention to researching statistics for students studying science and technology, their preparedness, and regional industry demands. Further discussions revealed that an alarming trend in education and industry needed to be reversed, and that what was needed was an educational program for both high school and community college students that could provide that hands-on technical training needed to be successful in industry.

Our attention then turned to West Valley Occupational Center because of its focus on technical training for industry. We chose this school because it serves such a diverse population of students and because it is the type of school that produces the most skilled

technicians. Referring to our research, we found that while most scientists and engineers attend a traditional program of university or graduate study, most technicians have less formal education and instead have technical certificates for hands-on training. Our research also shows that there will be a shortage of skilled technicians in the next coming years. A collective light bulb went off over heads and we saw the opportunity to offer students industry-level training to meet future industry demands.

Clearly, we had more than one problem to address, but fortunately we found a National Science Foundation grant for Advanced Technology Education to address the ones we felt most important. We quickly formulated our strategy to address the need to provide both teachers with hands-on training in industry as well as develop a curriculum that teachers could use in the classroom that would not only address state educational standards but also meet industry demands. By providing teachers with professional development opportunities in industry, students will be receiving the best instruction and most relevant experience. In addition, because of the move to sustainable design and green technologies, our grant could focus on industries such as manufacturing and architecture.

We decided that one of the results would be the establishment of a Science, Engineering, and Technology Institute (SETI) at West Valley. This would be a collection of classrooms, computer labs, and work areas in which instruction and hands-on training could take place. The SETI program would be a pathway for high school students and adults from the surrounding community to develop industry-level skills for a variety of

technical positions.

Now, even as we continue to develop the proposal, I feel this has been one of the more illuminating experiences. It has given me the opportunity to think outside of my classroom, to look at other ways that technical training could be better connected with industry, and to make industrial education programs more attractive to younger students. It was also important for me to be open and influenced by other views regarding education and pedagogical approaches. Having struggled for most of my eight years as a teacher with an under-funded computer aided design program, this experience has shown me that teachers sometimes have to step up and lead their school in obtaining financial support and not rely solely on stressed school budgets. On the other hand, this also means taking on the part time job of researching and applying for grants. In the end, it would seem that solving the needs of both education and industry would benefit all involved and that the ultimate result would be manifest in a more productive economy. These are lofty visions, but who, other than teachers, would be best positioned to effect such change.