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News from the Dean for International & Border Programs

NASULGC's Commission on International Programs' "Action Agenda for Internationalizing Higher Education"

The NASULGC report cited in the title was released in November 2007. The preamble of this report states:

Globally engaged universities are critical to maintaining America's place as a world leader and to ensuring its national security. American higher education must prepare graduates to be active participants in the world in which national boundaries are increasingly permeable. Information, capital, products, labor and individuals cross national borders with ever increasing frequency and speed. America's need to remain competitive in the world requires that its educational institutions produce globally competent human capital and leading edge research (p .2).

The report's preamble goes on to challenge universities to "critically examine their approach to higher education...to ensure that its students will be well prepared for the challenges of the 21st century." NASULGC institutions (including NMSU) send over 40,000 students abroad annually (more than 40% of all U.S. students who study abroad) and host approximately 215,000 international students (again close to 40% of international students who study in the U.S.).

This NASULGC report followed an earlier NASULGC report entitled "A Call to Leadership: The Presidential Role in Internationalizing the University" (November 2004). This latter report was extremely critical of America's failure to internationalize its university and college campuses, assessing failing grades to virtually all indicators of international knowledge among the country's graduates.

One of the challenges we have faced here at NMSU as we have grappled with the challenges imposed by campus internationalization is to define what we feel our students should know about the world once they graduate. In other words, how should we go about defining global competence for our students? The recently released NASULGC report cited in the title to this column addressed this issue, but it did so in a general kind of way. The report allowed that while there is a spectrum of learning outcomes the globally competent graduate should embrace, there is indeed "...no definitive list of attributes all graduates must possess..." [but] "...there is a spectrum of learning outcomes the globally competent graduate should embrace." And this spectrum includes:

- A diverse and knowledgeable world view;
- Comprehension of the international dimensions of the major field of study;
- Communicate effectively in another language;



Everett Egginton

- *Understand the importance of and exhibit sensitivity and adaptability in cross cultural communications and group experiences;*
- *Experience outside the U.S.; and*
- *Continue to develop their global competence throughout life.*

The report goes to define outcomes for faculty, since faculty are critical contributors to achieving an internationalized campus, and outcomes for institutions, since it is the colleges and universities that are at the center of internationally-focused knowledge creation and dissemination. With regard to outcomes for faculty, the report firmly urged that they:

- Demonstrate personal global competence;
- Practice global competence on their campuses; and
- Be actively engaged in international academic communities

With regard to institutions, the report urged colleges or universities to:

- Include internationalization as an integral part of their vision, mission and strategic plan;
- Promote academic and administrative leadership that is strongly committed to international engagement;
- Support international programs offices that serve the entire campus and all its programs;
- Integrate international perspectives into all curricula and co-curricula programs;
- Promote, encourages, values, and rewards internationally engaged faculty and staff;
- Integrate international perspectives into appropriate research, educational, and outreach programs; and
- Foster a diverse campus culture that values and encourages the presence of international students and scholars and engages them in all programs and in all aspects of campus life.

Comparing our advances in campus internationalization to the recommendations made in the NASULGC report and summarized herein suggest that while we have indeed made considerable progress in the last five years, we still have considerable work to do. I look forward to continuing to work with all of you to make NMSU a truly globally engaged university.

National Science Foundation New Mexico-Chihuahua Partners for Innovation Project

NMSU's NSF Partners for Innovation Project is drawing to a close; the project is scheduled to end July 31, 2008. This project which started in 2006 had the objective of improving economic development in the U.S.-Mexico border region through collaboration among project partners. The project included student teams from three Mexican educational institutions and two universities from the United States. The Mexican institutions participating in this project were the Universidad Autonoma de Ciudad Juarez (UACJ), the Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM), and the Centro de Investigación en Materiales Avanzados (CIMAV). The U.S.

universities were New Mexico Institute of Mining and Technology (NMT) and New Mexico State University (NMSU). The major objective of the project was to form student design teams at each university with the goal of designing technology solution for regional problems and/or needs which would result in the commercialization of developed technology. The project goals were centered in providing practical experiences for undergraduate students in the various areas of technology development from research development to the commercialization of research. Student were selected based on the needs of the team for example business students (marketing, management, or international business students), mechanical engineers, chemical engineers, industrial engineers, hard sciences, etc.

Each of the student design teams were guided and assisted by faculty advisors who worked diligently with their student groups. Below are descriptions of each student design team project.



NSF New Mexico-Chihuahua Partners for Innovation Student Design Teams, including Faculty Leaders and Project Staff from the Office of International & Border Programs.

NMSU & ITESM – Project

NMSU and ITESM agreed to collaborate on the same project. The NMSU-ITESM project was focused on the development of wind energy and technology along the border. Specifically, the project was aimed at the commercialization of wind energy. The project had several facets as follows:

- Develop an inexpensive but effective small wind turbine for grid applications;
- Identify good prospective wind sites along the U.S.-Mexico border;
- Commercialize the first wind farm along the U.S.-Mexico border; and
- Attract wind industry to the border

The research is meant to enhance existing wind energy research and development programs at NMSU and ITESM.

While large scale wind turbine technology has greatly advanced over the last twenty years and is now cost competitive with conventional fossil fuel electric generation technologies, small scale wind turbine technology has not enjoyed the same level of success.

For this project, NMSU and ITESM collaborated on wind resource assessment, promising wind farm site evaluation, and technology development. The final objective was the construction of grid-tied wind power station on the ITESM campus. The exact campus site was determined based on aerodynamic studies. Once the station is functional, it will be used as a research platform, the turbine will be scaled up, and the system will be connected to the campus utility grid.

NMT Project

The NMT project relies on the development of an understanding of the technology and markets for surfactant-modified zeolite as a purification agent for bacteria and virus-contaminated drinking water wells. The student design team assessed the commercial viability of surfactant-modified zeolite (SMZ) as a filter pack for drinking water wells. The team sought the feasibility of alternative delivery methods of SMZ, the long-term costs of SMZ as a solution for removal of bacteria and viruses from drinking water, and - possibly - the commercialization potential of SMZ-like methods of treatment of produced water in an oil and gas environment

UACJ Project

The UACJ student design team worked on an initiative to develop “GIS software to improve real estate market transactions in Ciudad Juarez, Chihuahua.” The purpose of this research project was to introduce in the local market a commercial device to facilitate the decision-making process on purchasing and/or leasing industrial, commercial and residential real estate, land, or facilities in Ciudad Juarez for both real estate companies and private land investors.



NMSU student design team, Danny Gomez, Zack Mills, Jaquie Sanchez. Included are Robert Foster, faculty advisor, Luis Estrada, NMSU employee helping with project, Leticia Vilchis, project coordinator.

CIMAV Project

CIMAV faculty/employees had already developed an effective sex gender determination method for reptiles, birds and mammals. The objective of utilizing this non-invasive method to determine sex for reptiles, birds and mammals was to carry out a better reproduction and adaptation of species and to increase the production of offspring. The CIMAV student design team specifically developed a feasibility study and business plan for a spin-off company to fabricate and commercialize the kit that determines the sex gender in reptiles, birds, and mammals.

The project culminated in a final showcase which was held on April 6-9 as part of the WERC Design Contest at the NMSU campus. The showcase provided an opportunity for the student design teams to present their findings to an audience drawn from the partner organization, regional businesses and industry, government agencies and economic development agencies from the region. The showcase consisted of two parts, an oral presentation and development of a poster presentation articulating the project findings. Both the oral and poster presentations were judged by a panel of four judges with specific criteria being developed and given to all student design teams. The student design team which was recognized for the best oral presentation was the NMT team and the team recognized for the best poster presentation was the NMSU team.

EDITORIAL NOTE:

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