



Conclusions and Recommendations

This essay has presented evidence of the three elements of student success. Improved recruiting efforts, including regular visits to high schools on Guam and throughout the region, informational promotions, and centers for mentoring and cultivating potential applicants, as well as new academic programs, expansions of course offerings, and feedback-driven promotion have been accompanied by increases in enrollment in general, and increased enrollments of the region's most promising high school graduates. The University has responded to WASC's recommendations, to data from prospective students, to data on enrollments and students' academic status, and to priorities identified by current students, academic programs, and the community: by identifying specific factors related to student retention and persistence to degree; by strengthening academic advising and work with student organizations; and by enhancing students' opportunities for research, creative production, service learning and internships. Individual programs have taken increased responsibility for optimizing outcomes for, and relationships with, alumni.

The University will continue to monitor these three aspects of student success over the next five years. Work to continue during that period includes the following.

1. The Alumni Relations Office will work to build, continuously update, interpret and make recommendations from, a database on career and other post-graduation outcomes for alumni, and on the needs and experiences of their employers and report regularly to the University community.
2. The University will continue to provide training for faculty in academic advisement and use of Colleague and WebAdvisor.
3. The University will develop and test interventions based on the latest study results to increase freshmen retention through academic and other coping skills. Freshmen in groups that have now been identified as at risk of non-retention will be targeted, and the University will track results, beginning with Pacific Islander freshman in Fall 2009.

Although engaging students in community service is an essential component of the work to promote student success, community engagement in a broader sense is an essential component of the mission of the University as a whole. The following essay explores indicators of the University's effectiveness in this endeavor.

C. THE LAND GRANT MISSION AND ENGAGEMENT

Introduction

Fulfilling the mission as a Land Grant institution requires strong linkages with the communities of Guam, Micronesia and the Asia-Pacific region. These linkages are based on research and on curricular and co-curricular programs that engage faculty and students with community needs in ways that develop stakeholders' skills, and capitalize on the region's cultural and economic diversities.

As the only four-year institution of higher education in the Western Pacific, the University makes unique contributions to positive change in the communities served. This essay provides evidence that the University is an effective partner in off-campus learning, applications of innovative research, and management of regional issues in collaboration with these communities. The engagement agenda calls for learning beyond the campus; applying research results beyond the academic community, and translating them into action; and providing service that directly benefits communities.

A framework developed in 1999 by the Kellogg Commission on the Future of State and Land Grant Universities—as adopted in the 2006 CPR Self Study—applies criteria of responsiveness, respect, academic neutrality, accessibility, integration of scholarship and service, coordination, and resource



partnerships to assess effectiveness. This essay provides evidence of effectiveness in each area. In addition, it applies a second framework to view programmatic information on the relevance and quality of community outcomes. These two frameworks allow the University to assess staff, programs and services devoted to community outreach, and to revise its objectives, agenda and resource allocations accordingly. CFRs 1.1, 1.2, 2.8, 2.9, 2.11, 4.1, and 4.8 are addressed in this essay.

Approach

WASC's 2007 Commission Action Letter encouraged the University to institutionalize its relationships with regional communities and their colleges. Accordingly, the University applied two models of best practice in engagement to assess its community engagement programs and services. The Kellogg Commission's Holland Matrix measures an institution's commitment by gauging faculty members' and students' involvement with the community with specific attention to the level of engagement through scholarship. The NASULGC model provides criteria for assessing the relevance of programs and activities, outcomes, and commitment to integrating engagement with the traditional academic mission and the regional institutions. The model also provides a foundation for a system of reporting on engagement. Accordingly, this essay provides survey data concerning engagement programs as well as direct evidence of outcomes and impacts of various programs in support of the land grant and engagement mission.

Evidence of the University's Commitment to Engagement

Survey Results

To provide additional evidence of the relevance, outcomes and impacts of community engagement programs, the University conducted a survey of deans, directors and others either managing or participating in recently conducted engagement activities, programs, and/or projects (EEF III.C.1). Thirty-one of 54 respondents completed the survey, reporting on 35 activities. To gauge engagement levels by areas, respondents indicated whether projects were regional, local (Guam only), national, international, or combinations. Of the projects reported, 94% were conducted with local partners and collaborators, with 31% of these also reporting collaborations with regional partners. Two projects were strictly regionally focused, serving Palau and the Commonwealth of the Northern Mariana Islands (Saipan), respectively; one project was locally and nationally partnered; and two projects were both local and international in focus.

Relevance. Relevant engagement activities—defined as responses to clients' needs—were identified by surveys, interviews and other research with stakeholders. 94% of programs surveyed reported a variety of such research, including surveys and focus groups, and using client and partner input to assure the relevance of educational programs. Evidence that stakeholder input has guided the design of programs and services is documented in program reviews, minutes of advisory group meetings, and annual plans of Cooperative Extension programs. Community input is requested and used in a variety of ways across the campus. Public hearings assess priority workforce needs. Each of the professional schools and the College of Natural and Applied Sciences have community advisory panels. Across the campus, approvals for new programs and program changes require community input and analyses of community needs.

Outcomes and Impacts. This section presents evidence that ongoing evaluations of programs for off-campus learning, applied research and service have identified emerging issues and priorities, and resulted in beneficial changes in the community. 74% of programs surveyed reported formal outcomes evaluations. Further, projects reported evaluation results to external partners such as the Guam Housing and Urban Renewal Authority; the U.S. Department of Housing and Urban Development; the U.S. Department of Agriculture; the National Institute of Health; the U.S. Department of Justice; the U.S. Department of Education and the public school system's DOE-funded Project HATSA; the U.S. Small Business Administration; the American Association of University Women; the Office of the Taxpayer Advocate; the



Governor's Council; the National League for Nursing Accreditation Commission Committee; and the Guam Board of Nurse Examiners. Communications with these external partners confirmed that the University's programs have achieved the desired outcomes.

Program evaluations assess the extent of change in knowledge, skills, attitudes and behaviors attributable to the programs and projects. Survey respondents reported on these impacts for all 35 projects and activities, indicating positive shifts in knowledge, skills and attitudes as the most frequent short-term outcomes. 77% of projects also reported medium-term impacts in behavior, practices and decision-making. Even projects with a strictly regional focus often have beneficial implications for the partnered communities. For example, one of the projects in partnership with the Republic of Palau was designed to meet needs for research on the ecology of global change in island landscapes. It had the additional effect of building scientific capacity in Palau through biodiversity research on ecosystem conservation.

Dissemination

The portfolio of evidence supporting this essay (EEF III.C.2) provides documentation of the dissemination of discoveries in applied research to regional communities. This dissemination serves two purposes: 1) directing informational benefits to these communities, using newly produced knowledge to close the loop that began with input-based implementations of services, and 2) providing an opportunity for additional feedback to improve the programs and services that generated the findings.

Formal program evaluations structured feedback on the 35 activities summarized earlier. Respondents confirmed that feedback had helped them to increase the positive impacts of their projects over the medium term, and had led to adjustments in priorities, and to improvements both in services and in the University's stature among stakeholders.

Engagement through Scholarship

Implementation of a Comprehensive Faculty Evaluation System (CFES) coupled with grants and academic initiatives within the schools and colleges facilitates integration of community service with teaching and research. As examples provided in the essays on student success and academic quality make clear, faculty and students are currently engaged in community-focused service learning and in research addressing community issues. This section provides a Holland Matrix-based review of evidence of scholarship as engagement.

Involvement in community engagement was assessed by asking faculty to indicate which level best described their service activities: 1) committee or campus duties; 2) *pro bono* consulting, community volunteerism; 3) tenured/senior faculty pursuing community research; 4) community research and service learning; or 5) none. 85% of the faculty responding reported professional involvement with the community, with most reporting community based research. Respondents indicated which level best described the involvement of students in service activities: 1) extracurricular or student life activities; 2) internships and practicum experiences; 3) volunteerism; 4) service learning; or 5) none. 75% reported organized student involvement as part of a learning activity.

Community Impacts

Changes in policies, rules and social action have a substantial impact on the community served. This section provides examples of recent positive changes occurring as a result of the engagement of applied research, outreach and grant activities with the community.

The Center for Excellence in Developmental Disabilities, Education, Research and Service (CEDDERS), a unit supported by Federal grants and local / regional contracts, supplies a particularly strong example of effectiveness in promoting positive social change. CEDDERS increased its funding by



nearly 50% in FY08 (\$7M in FY 07 to \$10.4M in FY 08) and has succeeded in meeting the community needs for advocacy and policies for individuals with disabilities. CEDDERS works with the CNMI, Pohnpei State, Guam agencies, and FSM on consumer, leadership and systems change. The health, wellness, and prevention programs cover child care, traumatic brain injury, early intervention, and maternal and child health to name a few. CEDDERS leverages resources by extensive collaboration with 23 universities, 25 non-profit organizations, and 37 Guam agencies and NGOs. As a direct result of their collaborative web and research-based interventions and education:

- The Guam Legislature appropriated \$750,000 to save *I Famagu'on-ta*: a system of care for children with serious mental health needs;
- New criteria for teacher and administrator performance were approved by the Education Board;
- New child care licensure requirements were developed, discussed and approved;
- The Legislature took action to modify taxes for child care providers as an incentive;
- Executive Order 2008-03 established the Guam Early Learning Council to oversee the early childhood comprehensive system, and established professional development plans for early childhood education professionals;
- The Legislature approved the PL 26-109 Vending Act for Individuals with Significant Disabilities, which provides for the development and implementation of policies and procedures for the administration of alternative assessments for students with cognitive disabilities for all six regional entities;
- New procurement policies for Guam, CNMI and American Samoa govern access to instructional materials for students who are blind or have print disabilities.

Another example of such change is the ban on smoking and tobacco use in the island's bars and restaurants, partially attributable to advocacy by the University's Cancer Research Center, and its evidence-based arguments at the Legislature. Use of tobacco has now been banned on the campus, at the Governor's office complex, and at many government agencies as well. Another policy change as a result of the University's applied research is the recent change making the teacher certification office an independent entity, removing the office from control by the public school system. The University's influence and outreach is strong in education, economic development, healthcare policy, and environmental issues.

The Micronesian Area Research Center (MARC), the Marine Laboratory (ML) and the Water and Environmental Research Institute (WERI) similarly are effective at facilitating evidence-based changes in cultural and environmental policies and regulations.

- MARC trained 19 students in basic archaeological field methods, and eight were hired on archaeological field projects. This constituted a fundamental change to the island's labor pool. Previously, most of the consulting firms brought their own field people to Guam at enormous cost. The Guam Preservation Trust's master plan in archaeology and oral history / ethnography exists because MARC contributed innovative technology and methodologies, as well as new research results and methods. MARC produced the only record of Latte period cultivations of sweet potato cultivation, early yam cultivation, and cultivation of wax-gourd in this part of the Pacific. Archaeological reports collection methods and procedures for Guam have changed because of MARC's advocacy. Also, as a result, the number of reports available for policy makers and researchers in the Guam Historic Preservation Office rose from about 200 to nearly 1000. MARC's intervention changed renewable energy planning from lip service to implementation through solar technology workshops and dialogue on the military buildup. As a direct result, the US Navy



released a pre-solicitation notice for Ocean Thermal Exchange Capacity energy generation to benefit not only the Navy base but also the larger Guam community.

- MARC is emerging as one of the University's entrepreneurial units, with a major Blanket Purchase Agreement with the U.S. Navy (10 years with no upper limit), to conduct cultural resource management projects resulting from the military build-up. In collaboration with SBPA, MARC secured another subcontract with Parsons Joint Venture, which was awarded the \$100 million program management contract from the Navy. This contract will draw on the University to provide basic studies and compliance services for the build-up. In the past two years, MARC has received grants and contracts for over \$700,000, and expects to become a multi-million dollar program during the years of the build-up. This money will be used to invest in infrastructure and capacity for future educational and research programs after the flush of consulting opportunities diminishes.
- WERI conducts research and training in the areas of water resources and assessment. Initiatives have produced positive changes in numerous areas, including land cover practice changes, watershed management (Guam, FSM, CNMI), and a major evaluation of the Saipan water distribution system. WERI conducts annual regional and local advisory council meetings to report findings, prioritize areas for research in response to local needs, and target grants in those areas. WERI has a fully developed and functioning cycle of assessment-action-dissemination.
- The ML continues to contribute to policy changes as they affect marine resources in the region. The Herbarium is a unique resource of terrestrial and marine plants, used by researchers and policy makers around the world. The ML leads the quest for Sea Grant status and is actively involved in outreach to local schools for science enrichment; with legislators, to promote environmental laws that will regulate fishing in protected areas; and in coastal economic activities.

There are many examples of effective community engagement led by CNAS:

- The USDA-funded experimental stations and cooperative extension services associated with the University's land grant status promote healthy living by educational activities for Guam's *manamko* (Project for Health Aging) and 4H projects.
- A sustainable academic remediation and job skills pilot program led to implementation of the About Face program through a partnership with the National Guard.
- The Guam Department of Health and Social Services (DHSS) and the Guam Comprehensive Cancer Coalition depend on support for strategic planning, resulting in grant funding to address areas of need.
- A partnership with DHSS collects health data using the Behavioral Risk Factor Surveillance System: the world's largest on-going health survey, which applies health and behavioral data to inform decision making.
- A partnership with the Guam Department of Agriculture supports demonstrations of conservation practices, sustainable agriculture, and research-based practical solutions for Guam's farmers.
- Programs identify and help eradicate invasive species. A faculty-designed plan to control the spread of and eradicate the rhinoceros beetle is currently underway.
- Ongoing workshops, grants, and youth development projects—including Family, 4-H, Food, and Nutrition; Agriculture and Natural Resources; Community and Economic Systems; Aquaculture Development; and the Western Pacific Tropical Research Center—continue under the leadership of CNAS.



Examples of Programs Meeting Engagement Standards

This section provides examples of community engagement with measured positive outcomes. Other examples are provided in EEF III.C.3.

- The Nursing program engages students and faculty with the community to identify and provide solutions for health issues. Nursing standards of practice in Guam have changed as a result of leadership from faculty, and local nurses participate with students and faculty in collaborative research across the island: in maternal outcomes, infection control, and public health. Results of student research are presented each year in radio interviews and a conference for nurses and students. This year senior nursing students conducted a community needs assessment in two low income areas, leading to the provision of a bus stop in the area, built with assistance from the military. Another student research project analyzes the health concerns of the residents near the Ordot dump.
- On the basis of input from focus groups and recent assessment research, the University implemented a project entitled *Capacity Building on the Ecology of Global Change in Island Landscapes of the Republic of Palau*. This project addresses a regional shortfall of scientific expertise in assessing ecosystems, by training Palauan students and scientists in the methods of ecological analysis: enabling studies that will inform policy and efforts to conserve their island ecosystems. This project enhanced the abilities of Palauan students and scientists to collect data, analyze ecologies, and contribute to policy.
- The *History of Guam Service Learning Project* engages students in learning about the island's past, with the goal of motivating them to take concrete actions to preserve its culture. Outcome assessments included scoring of student-produced essays.
- The *Summer Special Education Institute* addresses the shortage of special education teachers on Guam. Of the approximately 400 educators employed in special education, less than half have the proper special education credentials. In addition, assessments have identified a high rate of annual turn-over as a major problem. In collaboration with the Guam Public School System, the program provides teachers and administrators with accelerated training leading to certification and/or a graduate degree (M.Ed.). Students in the Master's program, all currently employed as teachers, gain knowledge and skills to improve services to students with disabilities.
- The grant-funded AmeriCorps provides tutoring centers in various public high schools, as discussed in the prior essays, and offers students a variety of service learning and community service activities in addition to tuition support.
- In a partnership with the Pacific Postsecondary Education Council (PPEC), the University provides financial resources, office space, and project management services. PPEC is a consortium of presidents and chief executive officers of institutions of higher learning (including community colleges) throughout the Western Pacific, with additional representation from Hawaii. PPEC supports assessment-based regional planning for postsecondary education; serves as a cooperative forum for addressing problems faced by all Pacific peoples; seeks resources dedicated to such areas as communications, alternative energy, and human resource development; and promotes inter-institutional cooperation in joint programs for education, research and service. Because many regional institutions lack the resources to conduct such work on their own, this consortium provides opportunities for these institutions, and for the University, to pool expertise and resources in service to the regional communities.
- The University chairs the subcommittee on Education and serves on the Guam Workforce Investment Board (GWIB) and on the Education, Tourism, Workforce Development and Conservation subcommittees of the Governor's Civilian Military Task Force. Participation in this Task Force allows the University to share expertise in addressing major social, economic, political and environmental issues facing the island and the region as they consider the impact of the impending military buildup. Working with GWIB—the governing board of the Guam Department of Labor and Agency for Human Resource Development—the



University provides support to the Micronesian Chief Executives Summit (MCES). As one outcome, the MCES created a Regional Workforce Development Council to consider regional manpower development and resources.

- An ongoing partnership with the College of Micronesia-FSM provides pre-service teachers with training for skills needed to teach in elementary classrooms, training that is unavailable in the FSM. This partnership allows seamless transfer of students and credits between the institutions, providing students with advisors and the opportunity to earn a B.A. degree in Elementary Education. The partnership is also designed to upgrade regional standards in teacher education.

Distance Education

The 2006 CPR Self-Study identified as one priority, "achieving consensus on a distance education plan, with a centralized system for supporting the technology that distance education requires". The President chartered a University Technology Advisory Committee (UTAC) with administrator, faculty from all schools and colleges, student and computer center representatives. UTAC developed the first IT master plan in 2005 and first IT policy in 2008. The master plan is currently being revised to include an updated IT assessment, infrastructure plan and strategic initiatives related to web based services, business process redesign and distance education. A distance education team developed a conceptual plan for resource support, which is being discussed with the colleges and schools.

Individual programs and projects continue to utilize various distance education technologies to deliver their services. For example, the Telecommunication and Distance Education Operation (TADEO) provides distance education, telehealth, search and rescue, emergency management and disaster relief services to the FSM, Palau, and the Marshall Islands. TADEO provides solar powered computerized communication networks and services to hundreds of outer island medical and educational organizations, which have no other means of communication. TADEO builds capacity by including locals in all aspects of the design, installations, operation, and maintenance of its systems.

A USDA/CSREES grant supports the purchase of infrastructural equipment and software to carry out distance learning initiatives at insular land grant institutions, including the University, the Northern Marianas College, Palau Community College, the College of Micronesia - FSM, the College of the Marshall Islands, the University of Puerto Rico and the University of the Virgin Islands. Through this grant, the University furnished a free standing classroom with video-conferencing capability and state of the art technology. This year's grant will enable the hire of a faculty member to design and deliver online distance education courses, and to train other faculty in distance education.

Next Steps

The 1999 Kellogg Commission report states that it is not enough for a university to produce graduates who will serve their communities. A university must also provide direct service to these communities, through teaching, research and service that address immediate and long-term challenges.

WASC's 2007 Site Visit Report and Commission Action Letter commended the University for its success in serving regional needs, and reiterated the need to "institutionalize its collaborative relations with the Micronesian region's community colleges." This essay has provided assessment- and external criteria-based evidence that the University continues to expand its service to the region, and that, through its work in the Pacific Postsecondary Education Council (PPEC) and partnerships in programs, has furthered its collaboration with the region's other institutions of higher education.

The continued success of the University's engagement will depend in part on the efficient use of funds presently available and on developing new sources of revenue for new initiatives. This self-study's final essay examines this and related points in detail.