University of Puerto Rico
Mayagüez Campus
www.uprm.edu

Self-Study Report

Submitted to

The Middle States Commission on Higher Education
3624 Market Street
Philadelphia, PA 19104

January 14, 2005

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LIST OF ABBREVIATIONS USED

AAHE	American Association for Higher Education
ABET	Accreditation Board for Engineering and Technology
ANR	Agricultural Marketing and Natural Resources
ACS	American Chemical Society
BEAMS	Building the Engagement and Attainment of Minority Students
CEEB	College Entrance Examination Board
CEP	*Centro de Enriquecimiento Profesional* (Center for Professional Enhancement)
CID	*Centro de Investigación y Desarrollo* (Research & Development Center)
CIEI	Continuous Improvement Educational Initiative
CISA	*Centro de Investigación Social Aplicada* (Center for Applied Social Research)
CRD	Community Resources Development
CREST	Center of Research Excellence in Science and Technology
DECEP	*División de Educación Continuada e Estudios Profesionales* (Division of Continuing Education and Professional Studies)
EAC	Engineering Accreditation Commission
EC2000	Engineering Criteria 2000
EEA	*Estación Experimental Agrícola* (Agricultural Experiment Station)
FCS	Family and Consumer Services
GM	General Motors
GRE	Graduate Record Examination
HACCP	Hazard Analysis and Critical Control Point
IDEAL	*Instituto para el Desarollo de la Enseñanza y el Aprendizaje en Línea* (Institute of Educational Development and Learning on Line)
IGS	*Indice General de Solicitud* (General Application Index)
MOU	Memorandum of Understanding
MSA	Middle States Association
MSCHE	Middle States Commission on Higher Education
NCAA	National Collegiate Athletic Association
NCHEMS	National Center for Higher Education Management Systems
NCTLA	National Center for Post-Secondary Teaching, Learning, and Assessment
NLNAC	National League for Nursing Accrediting Commission
NSSE	National Survey of Student Engagement
OIIP	*Oficina de Investigación Institucional y Planificación* (Office of Institutional Research and Planning)
PaSCoR	Partnership for Spatial and Computational Research
PEAU	*Pruebas de Evaluación y Admisiones a la Universidad* (University Evaluation and Admissions Tests)
PLES	*Plan Estratégico Sistémico* (Systemic Strategic Plan)
PRCHE	Puerto Rico Council on Higher Education
PRR	Periodic Review Report
SAT	Scholastic Aptitude Test
SEA	*Servicio de Extensión Agricola* (Agricultural Extension Service)
SEED	System for the Evaluation of Education
TOEFL	Test of English as a Foreign Language
TQM	Total Quality Management
UPR	University of Puerto Rico
UPRM	University of Puerto Rico, Mayagüez Campus

CHANCELLOR'S MESSAGE

Ever since its establishment in 1911 the University of Puerto Rico at Mayaguez (UPRM) has been distinctive in a number of essential ways that have made it a key institution in Puerto Rico and the Caribbean. First, it was established "as a land-grant institution committed to teach agriculture, military tactics, and the mechanic arts as well as classical studies so that members of the working classes could obtain a liberal, practical education."

A second distinctive aspect of UPRM has been its commitment, unique in Puerto Rico and in the Caribbean, to a combination of high quality programs in agricultural sciences, engineering, arts and sciences, and business administration. UPRM has effectively expanded its programs to include a teacher's preparation program which graduates the students with the highest scores in the teacher's certification program in Puerto Rico. The success of academic institutions in today's changing environments requires processes aimed at continuously improving the university undertakings. ABET accreditation is a top priority for the College of Engineering and currently all of our programs are accredited under the new ABET EC 2000 Criteria. ABET 2000 is based on outcomes, rather than simply input, and requires the implementation of a continuous quality improvement (CQI) process in each accredited program, as well as within the College itself. Currently efforts are underway at UPRM to get, before 2010, the accreditation of all programs and organizations such as: the teacher's preparation program, the school of business administration programs, the museum and the library.

A third distinguishing element has been the campus effort to institutionalize the Continuous Improvement Educational Initiative (CIEI). This is a campus wide three year effort started in 2003 that envisions the development of a new outcomes based academic environment to help ensure that students will receive the best education possible. It recognizes that learning is a complex process and that student learning is the responsibility of all academic stakeholders. This long term effort entails assessing not only what students know but what they can do with what they know; it involves not only knowledge and abilities but values, attitudes, and habits of mind that affect both academic success and professional performance. It entails comparing educational performance with educational purposes and expectations, those derived from the institution's vision and mission, from faculty intentions in programs and course design, and from knowledge of students' own goals. Thus understood, CIEI is not a task for small groups of experts but a collaborative activity; its aim is wider, better-informed attention to student learning by all parties with a stake in its improvement. One important result of this process is to have institutionalized a process to be prepared for any program or institutional accreditation.

A fourth distinctive characteristic is the quality of its students and graduates. Highly selective student admissions can be credited to improvements in institutional value which presents superior expectations by stakeholders of the faculty both in teaching and in scholarship. In the past decade, UPRM became a top engineering school graduating Hispanics in the US. Every year around one hundred companies participate in the Fall Job Fair recruiting hundreds of students for permanent positions and internships in Puerto Rico and the US. Through its MARC, Sloan and Howard Hughes programs, in the past decade, more than fifty undergraduate science students have been accepted and finished Ph.D.'s programs in science in top universities in the US, such as Yale, Harvard, Michigan, Stanford and MIT. UPRM sends around forty persons, former

undergraduate students sponsored by the institution, obtaining Ph.D.'s in highly selected universities in the US to return to teach and do research.

The profile of a UPRM student includes the following characteristics: one who is a self learner (hundreds of students participate annually in student competitions presenting their research projects in the US and obtaining top positions), interested in multidisciplinary activities, talented (the student athlete grade point average is significantly higher than the general population of students grade point average and UPRM has also been successful in the graduation rate of student-athletes as measured by the NCAA), hard working, and one who values a total educational experience(thousands of students participate in over 175 student organizations). More than one hundred and fifty students participate every semester in service learning projects in over forty projects in communities throughout PR sponsored by the University Institute to Support Communities and the EPICS program. Wide-ranging student services (including, for example, internships, mentoring, undergraduate research, professional opportunities, community service learning, and student leadership services such as student government) also expanded since the last accreditation visit to match the educational offer to the student profile. Strong student involvement and awareness supports a broad athletics program that is highly successful while adhering to the student-athlete model (our athletes rank in the first or second positions in the overall intercollegiate athletic competitions in PR). UPRM was accepted last year as a full member of Division II of NCAA.

Campus facilities have grown in the past decade, with new buildings for the Biology Department and the College of Business Administration. In the next four years the campus will have a museum, a theater, a renovated building for faculty offices, new facilities for the Biotechnology Learning Center and the Food Safety Institute, a University Facilities Complex, a renovated building for graduate students and faculty housing, facilities for the Food Technology Program, an expansion to the Chemical Engineering Building and a new building for the Seismic Network. The construction of the building for the Electrical and Computer Engineering Department should be in an advanced phase at the end of 2008. The next Permanent Improvements Plan should include, among others, a building for the Social Sciences Department and a Research Building.

In the past decade, we have seen several of our best students and graduates ascend to national distinction and credit. It is our duty to persist in investing in our students, hiring and retaining top faculty and acquiring modern facilities and equipment. Our institution is preparing a new cohort of leaders in business, engineering, the arts, science, technology, health professions and education, and other fields. First-rate graduate and undergraduate and professional programs at UPRM catch the attention of the best and the brightest students in PR, enabling us to contribute to Puerto Rico's future growth and development through the graduating classes of well prepared professionals. As a result of the success of implementing UPRM's mission and strategies the institution requires extensive financial resources. The implementation of its strategic plan will require important financial resources in the next decade. Financial resources have not grown substantially since the last accreditation visit. Other factors that affect the institution's financial profile: the tuition has not increased since the academic year 1992-93, UPRM does not have an endowment, and its fundraising program is in the initial stages. During the past two years the foundation for a fund raising program at UPRM was started: personnel was recruited, a data bank with alumni information was created, initial contacts were established with potential major gifts donors, communications were sent to registered alumni and a successful week-long activity was

developed at a major shopping mall to present the presence of the University in teaching, research and outreach. The three most important financial challenges for the campus are to incorporate the increased operating costs of new buildings into the operating budget, adjust budgets for the increase in technology and utilities cost, and fund a much needed building and facilities maintenance program.

UPRM's Comprehensive with Special Emphasis Self-Study is the outcome of a wide-range and open campus participative process. Based on the self-study we understand that UPRM meets all of the essential elements of each of the MSCHE's standards for excellence. The process has enhanced our campus-wide alertness of the benefits of continuous quality improvement. It also has set in motion detailed actions to institutionalize a comprehensive strategic planning culture, a comprehensive outcomes assessment culture, including student learning outcomes to help in better decision making and fulfillment of the needs of our stakeholders. Moreover, specific actions and plans were established based on the self-study to address the weaknesses identified in the process. UPRM is again in a period of stabilization after a fairly extensive period of turnovers of administrators at all levels. However in the context of these changes, UPRM has in fact continued to advance in the most important measures of quality and institutional performance. As the study reflects, there has been a significant opportunity loss to this change, and further improvements may well have been possible under a more stable pattern of leadership.

UPRM is facing with specific actions five key institutional strategic challenges that will shape the profile and future of the institution in the coming years: academic quality, administrative leadership, strategic planning, student learning assessment and financial health.

Academic quality: Four prominent issues will have the greatest effect on the future of academic quality at UPRM: a stable student enrollment, faculty quality, a strong research agenda, and new and innovative programs. During the past five years the total enrollment has been around 12,200 students. A stable total student enrollment is essential if UPRM is to remain competitive. Five agreements (two additional ones will be established before June) exist to have students study the first two years in other UPR campuses. Moreover, a delicate balance between undergraduate and graduate enrollment has to be established in order to continue supporting the research agenda. Such decisions are essential if UPRM is to continue to recruit the most talented students and faculty. UPRM has invested extensively and successfully to attract faculty with the expected profile to accomplish its mission. However a growth and commitment to the research agenda of the institution is requiring the deans and department directors to modify their recruitment plans. The Administrative Board is examining very closely the faculty development support program to align it with the different strategic plans in order to maintain the level of quality of the faculty. The research agenda at UPRM has been anchored mostly in department or faculty initiatives. Some initiatives have crossed departmental boundaries but they are the exceptions. Last semester a process was initiated with the deans and the Director of the Research and Development Center to facilitate a participative process to establish general guidelines for a research agenda for UPRM. Key objectives are to include research with specific actions in the strategic planning process of the institution, to have parameters to guide the research investments (such as matching grants and the construction of research facilities), to align the recruitment plans with the research agenda and to strengthen the institutions core research areas to be competitive in attracting important grants. By the end of 2005 UPRM should have a document that will serve as a road

map for research initiatives. To remain competitive UPRM has to offer programs that recognize the changes that are occurring in the internal and external university environment. Important initiatives have been implemented to address some of these changes: the UPR system is engaged in a program to send students to six universities in Spain for a third year of studies abroad, the Board of Trustees has established the guidelines to facilitate cross disciplinary studies within the existing curriculums and proposals are being discussed at departmental and college levels to integrate and update programs such as in the College of Agricultural Sciences, Arts and Sciences and Engineering. Currently the Board of Trustees is requiring a zero-based new program proposal. This means that every new program proposal has to bring a plan to disband an existing program.

Academic administrative leadership: Three actions are already in progress to address the issues presented in the self-study in relation to academic administrative leadership. First, a series of seminars and workshops started last August for all deans, associate deans, assistant deans, and department directors on institutional and departmental policies, procedures and regulations in those areas identified as weaknesses in the self-study such as: personnel evaluation, grievances procedures, recruitment processes, contracts and legal aspects of human resource management. These seminars will be institutionalized as part of the mission of the Center for Professional Growth. A similar program started two years ago for every graduate teaching assistant in areas related to their responsibilities. Second, by December of 2005 UPRM should have a new proposal for faculty evaluation procedures which will include, among other things, the evaluation of all faculties in administrative positions. A campus-wide steering committee is working on the development of a continuous objective faculty performance appraisal system. Third, the Board of Trustees is developing a blueprint to evaluate the chancellors of the University of Puerto Rico system.

Strategic planning: To address the recommendations of the self-study specific actions have been taken to institutionalize the culture of strategic planning. The self-study explains the different actions taken to accomplish this goal. A highly participative process involving all faculties and official bodies, such as the Academic Senate and the Administrative Board, is helping the process of institutionalization. In addition the Chancellor includes discussions of the campus strategic planning in the agenda of the Academic Senate, the Administrative Board, the staff meetings and the end of the semester institutional evaluation meetings with the deans. The campus strategic planning is aligned with the system-wide strategic planning presidential initiative.

Student learning assessment: UPRM's assessment measures indicate substantial accomplishments in achieving institutional wide-ranging goals for student learning such as: graduation rates, retention rates, placement of students and number of students continuing to graduate school. However UPRM approached the establishment of a student learning outcome assessment culture with specific actions. Institutional responsibility for assessment is now centralized in the Office of Continuous Improvement Educational Initiative. Each department has established specific roadmaps to include student learning outcomes assessment plans and they are in the early stages of implementing them. The official website of the CIEI (http://www.uprm.edu/msa/Assessment.html) presents the approved institutional assessment plan and the departmental student learning plans. Each college has established formal structures to work with the implementation of the plans. To a large extent, much remains to be completed at

all levels to completely put into operation the initiatives in the UPRM's institutional and departmental plans. Long-range leadership and support from the department directors, deans and chancellor will be essential to the accomplishment of these efforts.

Financial issues: the next decade will be a period of stretched budgets, and will entail continuous long-term consideration of strategies to increase revenues as well as hard choices to manage the unsustainable growth in key cost elements such as: utilities, competitive salary levels for faculty and staff, and infrastructure. This is particularly true to address the self-study recommendation of recruiting new faculty "as the institution is putting greater emphasis towards research." During the most recent years short-term development only was achieved through a planned reallocation of items in the budgets. To be competitive in the long term UPRM will require superior revenues. Three elements will affect the fiscal health of the institution in the next decade: the possibility of establishing feasible schemes to increase the tuition, the success in institutionalizing a long term fund raising culture and the level of success in attracting competitive grants for research and infrastructure.

The University of Puerto Rico at Mayaguez is a strong, established campus that is positioned to accomplish innovative and significant levels of excellence. The process of carrying out the self-study has been a significant opportunity to recognize the institution's strengths and acknowledge areas for progress. As mentioned before, critical challenges remain in the institution's future but the recognized strengths of the institution provide a solid groundwork on which to build the next level of excellence. This document presents an overview of the institutional progress since the previous accreditation visit and outlines specific recommendations to establish the path of its future. Given the progress since the last accreditation visit, the university's faculty, staff, and students should look to the future of UPRM with assurance, building on the successes of the past and effectively meeting the challenges yet to come. As we look over the perspectives of UPRM into the next decade, further growth of its accomplishments ought to and will happen. The academic community is confident that this outstanding University of Puerto Rico at Mayaguez shall keep on demonstrating distinction in all aspects of its existence.

EXECUTIVE SUMMARY

The primary purpose behind this self-study was to assess the strengths and weaknesses of this institution and, through this process, determine the course of action which will enable us to sustain our academic excellence and better serve our constituents. UPRM's main constituents are students, parents, faculty, administrative personnel, employees, alumni, employers, and the external community. While the fact cannot be ignored that any impending accreditation visit by an external agency tends to serve as a catalyst to drive institutional self-assessment efforts, our ultimate purpose in the long run is to independently internalize this process with the goal of improving services to our constituents.

Specific Goals and Objectives

1. To evaluate actions which comply with previous MSCHE recommendations, such as:
    a. Developing and implementing a comprehensive institutional strategic plan
    b. Developing and implementing a comprehensive outcomes assessment plan including student learning outcomes.

2. To improve campus-wide awareness of the benefits of continuous self-evaluation and set in motion the institutionalization of an outcomes assessment program to help in better decision-making and fulfillment of the needs of our constituents.

Self-Study Model Selection

In keeping with the view of selecting a model that should "foster further institutional self-study and planning" (*Designs for Excellence*, MSCHE, 2002, p. 6), the Chancellor of UPRM, in conversation with the Director of the Office of Institutional Research and Planning (OIIP), concluded that the **"Comprehensive with Emphasis"** model would be the most meaningful self-evaluation process for our institution. The rationale behind the selection of this model can be traced to the Periodic Review Report (PRR) of 2000, submitted to MSCHE in June 2001. In the response to this report, MSCHE stated **shortcomings** in the **strategic planning** and **outcomes assessment areas**, and formally requested that UPRM submit a follow-up report by October 1, 2003 to document the development and implementation of a strategic plan and an assessment plan (including student learning outcomes). Thus, while the self-study is comprehensive in that it focuses on all 14 MSCHE standards for accreditation, the study puts a particular emphasis on strategic planning and assessment (Standards 2, 7, and 14).

Outcomes Assessment – Prior Experience

The University of Puerto Rico at Mayagüez, had had some experience related with assessment in some earlier educational projects in the College of Engineering; such as, the Manufacturing Engineering Education Partnership (MEEP) Learning Factory, which was funded by NSF in 1994; and the Partnership for Spatial and Computational Research (PaSCoR), which was funded by NASA in 1998. This was later followed by an ABET visit in November 2002 when all six undergraduate programs in the College of Engineering were re-accredited as per the new Engineering Criteria 2000. This required undertaking planning and organizational steps fully four years prior to the actual site visit. To institutionalize this assessment process across the

programs and the various courses, the College of Engineering established a permanent System for the Evaluation of Education (SEED) Office during the summer of 2001. The following statement from the visiting team attests to the outcome of the visit.

"The institution's systematic and innovative effort to introduce the culture of outcomes-based assessment effort to the College of Engineering is especially noteworthy."

Formation of the present UPRM-MSCHE Institutional Steering Team
On January 24, 2003, a new UPRM-MSCHE Steering Team was formed. Eleven task forces were created to address the fourteen Standards of Excellence. Some of the task forces have more than one coordinator who serve as co-coordinators, or deal with more than one standard. These coordinators are representative of all the four academic colleges on campus, and they, along with four personnel in advisory roles, with the Dean of Academic Affairs, and the Director of the Office of Institutional Research and Planning as *ex-officio* members, make up the new UPRM-MSCHE Steering Team. An additional twelfth task force was created much later to attend to issues relevant to the evaluation visit to be made by the Puerto Rico Council on Higher Education (PRCHE).

Commitment to Change – Continuous Improvement Educational Initiative (CIEI)

The Chancellor, Dr. Jorge I. Vélez Arocho, launched a new campus-wide effort in January 2003 called the Continuous Improvement Educational Initiative (CIEI). The CIEI Office envisions the development of a new outcomes-based academic environment to help ensure that students will receive the best education possible. The UPRM-MSCHE Steering Team, which presently drives the CIEI efforts, devotes a great deal of time and energy in analyzing the academic environment to determine why changes should be made, what changes should be made, who should make them, and where they should be made. The push to improve educational performance has become a visible and primary goal of the institutional leadership, along with improving the quality of undergraduate education, which is central to the UPRM's planning, budgeting, and personnel decisions.

Outcomes Assessment – Implementation across the Institution

The Chair, William B. DeLauder, in his letter dated November 20, 2001 to the then Chancellor Pablo Rodríguez, requested a follow-up report by October 1, 2003, documenting the development and implementation of a comprehensive outcomes assessment plan including student learning outcomes. This, while forming a basis for model selection, led to actions, which resulted in the development of (1) *Plan for the Assessment of Overall Institutional Effectiveness*, and (2) *Institutional Plan for the Assessment of Student Learning Outcomes* (both approved by the UPRM University Board on August 28, 2003). The UPRM Academic Senate, as was required, also approved the latter plan, on September 30, 2003. The central component of the *Institutional Plan for the Assessment of Student Learning Outcomes* was the development of learning outcomes at the institutional level, which were acceptable to all four colleges. These would then serve as a basis in the *development and implementation* (with the exception of the College of Engineering) of similar such plans at the departmental levels. The College of Engineering already had such plans in place and implemented because of the ABET re-

accreditation visit in November 2002. This prior experience from the College of Engineering guided the development of these two institutional plans, and the institutional student learning outcomes. The publication *Designs for Excellence* (MSCHE, 2002, p.7) alludes to avoiding duplication of effort by stating, *"the institution may use recent research, reports, and evaluations prepared for internal use."*

Support from the Academic Senate

As a consequence of direct input from the UPRM-MSCHE Steering Team, the UPRM Academic Senate, in its commitment to assure the development and implementaion of plans for the assessment of student learning outcomes at the departmental levels, along with for all newly proposed programs and any revisions in existing programs, issued a campus-wide directive on March 16, 2004 (Certification No: 04-12).

Institutional Commitment for Continuous Assessment

As part of the self-study process, the UPRM-MSCHE Steering Team relied on the data by the administration of thirty-three custom-designed questionnaires, and three surveys. This served as a first cycle. The second cycle for the administration of these surveys and some selected questionnaires would begin during the Second Semester 2004-05, which would then be repeated on an annual basis. These internal efforts would be complemented with the results of UPRM's recent agreement to participate in the Building Engagement and Attainment of Minority Students (BEAMS) Project.

Strategic Plan – Development and Implentation Progress across the Institution

In November 2001 MSCHE accepted the UPRM Periodic Review Report and reaffirmed accreditation. However, William B. DeLauder, Chair of the MSCHE, requested a follow-up report by October 1, 2003, documenting the development and implementation of a comprehensive institutional strategic plan. Consequently, Chancellor Pablo Rodríguez made Strategic Plan and Outcomes Assessment a priority and activated assessment and planning committees. In 2002, Chancellor Dr. Jorge Vélez-Arocho also made strategic planning a priority of his administration. This decision led to actions, which resulted in changes to the existing strategic plan. In January 2004, this process led to the adoption and approval of a new strategic plan by both the Academic Senate and the Administrative Board. The revision process and the state of affairs regarding strategic planning at UPRM are summarized below.

1. On September 22, 2003, the UPRM Administrative Board (Certification No: 03-04-188) approved an initial proposal for review and update of the existing UPRM's Strategic Plan. In 2003 and 2004, this revision effort was carried out with the participation of all deans and resulted in a new Strategic Plan. The UPRM Administrative Board approved this new Strategic Plan on September 2, 2004 (Certification No: 04-05-090), and the Academic Senate approved it on September 21, 2004 (Certification No: 04-39).
2. The strategic plans from the four academic colleges (Arts & Sciences, Business Administration, Agricultural Sciences, and Engineering) and the offices of five key administrative units (Dean of Academic Affairs, Dean of Students, Dean of

Administration, Chancellor's Office, and the Research & Development Center) have been revised and aligned with the new Strategic Plan of UPRM.

3. The strategic plans of all academic departments and administrative units have been revised.

4. During the revision process in 2004, a standardized system was created to ensure that strategic plans from colleges, departments, and key offices were aligned with their operational plans.

5. As a consequence, for the first time, all the offices of deans, academic departments, and key offices have their short, medium, and long-term operational plans aligned with the Strategic Plan of the UPRM.

6. The operational plans assign responsibilities for each task and project. They include time frames and metrics to monitor the progress.

7. The chancellor and the deans have instituted a three-month periodic review to assess the progress in the eight strategic goals defined in the Strategic Plan of the UPRM.

8. The format of the UPRM Institutional Annual Report was modified and aligned with the established goals and objectives of the strategic plan.

9. A process has been initiated for developing assessment plans for administrative units to ensure that they support the institution's vision and mission.

10. The Academic Senate (Academic Senate certification No. 04-01) recommended that the UPRM administration:

   - Communicates the strategic plan to all personnel and gives it to all new hires.
   - Designs a graphical display showing the main components of the strategic plan and their relationship.
   - Publicizes both the mission and vision of the UPRM in all administrative offices.
   - Develops an operational plan and its corresponding budget and an organizational structure that guarantees the implementation and the continuous assessment and adjustment of the strategic plan.

UPRM-MSCHE Steering Team's Institutional Recommendations

1. Implement a process to institutionalize the revised Strategic Plan across all colleges and administrative units. The Office of Institutional Research and Planning (OIIP) should be strengthened to assure accountability and continuity. This action, which requires the support of the entire community, would serve to guide all institutional decisions and assure the sustainability of the revised Strategic Plan.

2. Assess the process of administrative appointments to guarantee stability, continuity, and effectiveness to all administrative procedures. Administrative turnovers cannot be totally avoided, but they can be minimized. A sustained accountability system would lead to greater long-term stability in terms of strategic decisions.

3. Increase the institution's operating budget by taking into account the allotted budget and an increased reliance on external funds. Increasing the tuition to more realistic levels would also help to meet actual institutional expenditures. The tuition revision is long overdue as the current tuition rates are not able to safeguard quality in the services provided to the academic community and to preserve the physical infrastructure. Also,

the institution needs to embark upon a vigorous fund raising campaign involving its alumni, which until now has largely remained untapped.

4. Have the Academic Senate reactivate the Autonomy Committee, which had been appointed to investigate the loss of decision-making and financial power that affected UPRM negatively fifteen years ago. The situation has deteriorated significantly under the new university law of 1994, which gave increased power to the former regional colleges and upset the previous balance of decision-making power on the University Board.

5. Make more faculty positions available in all colleges. Both teaching and research need to be carefully balanced without sacrificing the quality of either.

6. Revise existing criteria for all personnel evaluations and implement a continuous performance appraisal system. Supervisors should inform personnel in a timely manner of expectations and requirements for tenure and promotion.

7. Require that all administrative personnel receive orientation and training on institutional and departmental policies, procedures, and regulations.

8. Structure, formalize and shorten the procedures to establish new degree programs and to implement curricular changes. This is vital if this institution is to continue as a competitive institution.

9. Require formal adherence to outcomes based procedures for improving academic programs and other services provided to the students. The responsibility for the assessment of student learning outcomes needs to be clearly delineated to guarantee its continuity. This could be done by an official mandate from the Office of the Dean of Academic Affairs.

10. The admissions process must be reviewed to decrease the high percentage of incoming students with deficiencies in Mathematics and English.

Feedback from the UPR Community on the Self-Study and Institutional Recommendations

The highlights of the institutional self-study, along with the above institutional recommendations were disseminated to the UPRM community in eight (8) public meetings during the months of November and December 2004. A total of 256 persons consisting of faculty and non-teaching staff participated in the surveys, which were given immediately following the presentations. Agreement levels ranged from a low of 88.28% to a high of 98.44% with the UPRM-MSCHE Steering Team's recommendations. The details of these surveys can be found on our Web site at www.uprm.edu/msa under the link CIEI Survey Results.

UPRM INSTITUTIONAL PROFILE

This section highlights important UPRM data trends regarding students, faculty, and institutional resources that the Office of Institutional Research and Planning (OIRP) is currently evaluating. In order to establish these trends, different time frames were selected, depending on the availability of the information. Most of the information contained in this section was drawn from the OIRP's databases and information provided by the UPRM Budget Office.

First-Time Degree Seeking Students

Since 1996, the demand for admission to UPRM has exceeded the space available for first-time degree-seeking students, despite the fact that the number of applicants has decreased from 4,079 in 1996 to 3,492 applicants in 2003 (see Figure 1). Over 60% of our applicants are admitted, of which more than 85% enroll as freshmen at our campus.
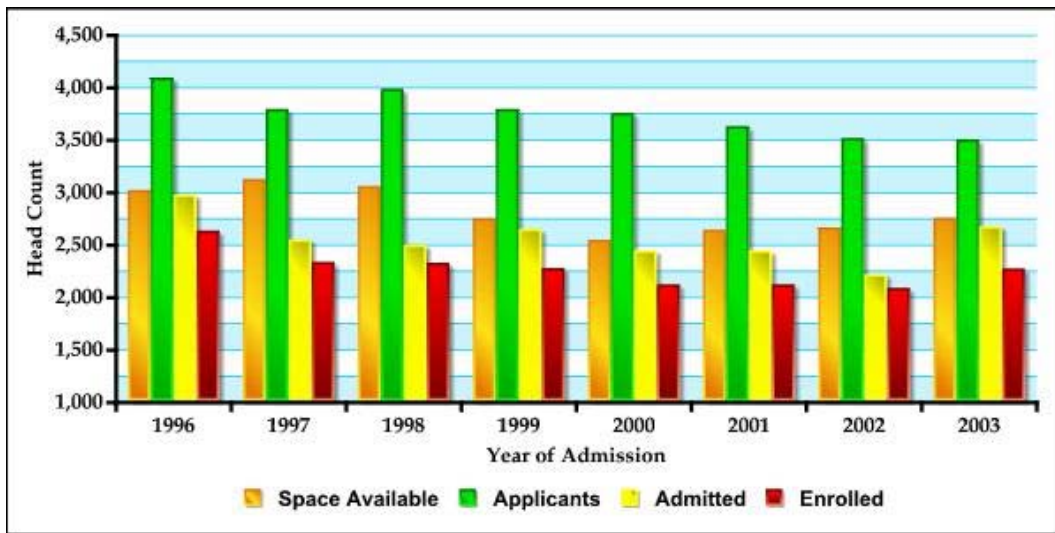
Figure 1. UPRM trends in offer and demand of first-time degree-seeking students

Figure 2 shows that the retention of freshmen students through sophomore year has decreased approximately 2% between the 1995 and 2000 cohorts. Nevertheless, the average retention rate of over 90% is significantly higher than that reported for California State University (CSU) Dominguez Hills[1, 2] ($\bar{x} = 73\%$) and by the National Center for Higher Education Management Systems (NCHEMS) for the United States during a similar time frame[3] ($\bar{x} = 74\%$). Retention through junior and senior years has exhibited a larger decrease (6% and 8% respectively), but they are also significantly higher than those for CSU Dominguez Hills, where approximately 60% and 52%, respectively, of their freshmen return, as compared to approximately 83% and 75% of UPRM freshmen that return for their junior and senior years.

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[1] CSU Dominguez Hills was selected for comparison since it has been determined by the National Postesecondary Education Cooperative (NPEC) as a comparison group for UPRM according to NPEC IPEDS Data Feedback Report: 2004.
[2] Data from CSU Dominguez Hills Office of Institutional Research, Assessment, and Planning website (http://www.csudh.edu/oir/Retention.htm)
[3] Available at http://www.higheredinfo.org/dbrowser/index.php?level=nation&mode=graph&state=0&submeasure=27
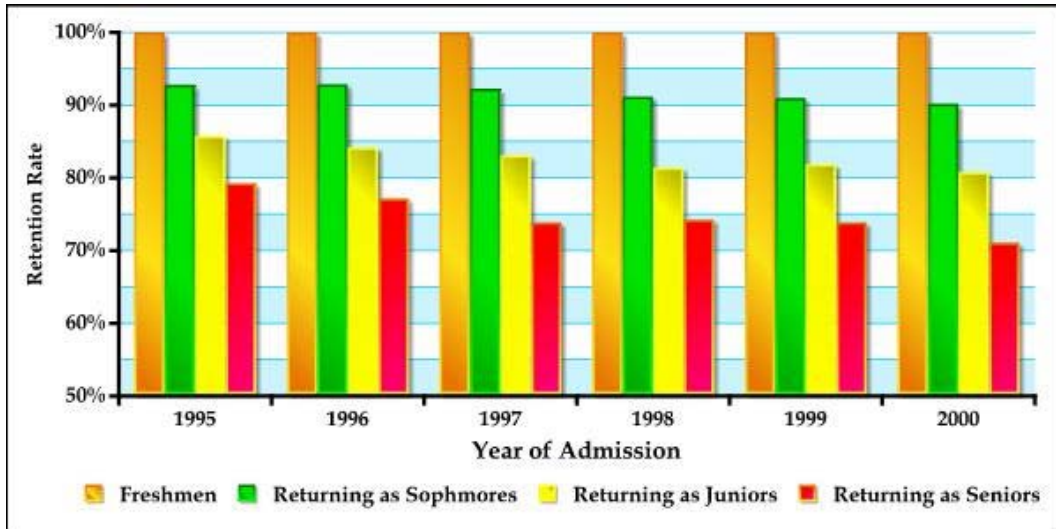
Figure 2. UPRM retention rates: 1995-2000 cohorts returning as Sophomores, Juniors and Seniors

In terms of completions, after a slight decrease as shown in Figure 3, the UPRM general degree-seeking graduation rates[4] increased from 55% for the 1991 cohort to 62% for the 1994 cohort. A sudden decrease of 6% was exhibited by the freshmen class of 1995, which remained fairly similar for the 1996 cohort. These rates are slightly higher than the national average of 53% according to NCHEMS for this time frame. An examination of these rates by gender reveals a marked difference between males and females, where the latter are more likely to complete a degree within 150% of the expected time.
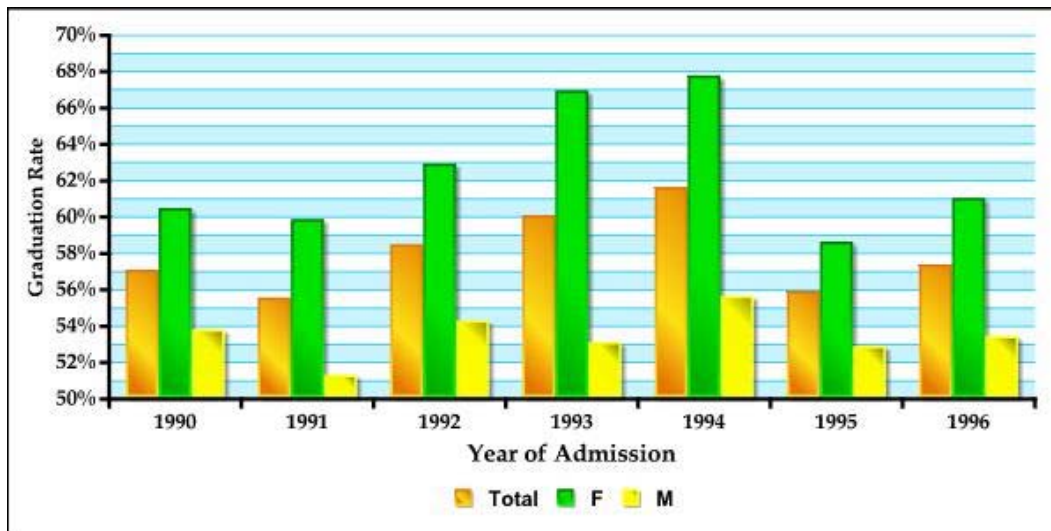
Figure 3. UPRM graduation rates for the 1990-1996 cohorts

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[4] Graduation Rates in terms of first-time degree-seeking students that completed a 4 year program in 6 years or less or a 5 year program in no more than 7.5 years upon admission.

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A comparison by academic college reveals that the College of Engineering has had the highest and most stable graduation rates, followed by Business Administration and the Science programs from the College of Arts and Sciences (see Figure 4). Also, for all colleges with the exception of Engineering, the graduation rates dropped significantly with the 1995 cohort, as was observed for the general graduation rates.
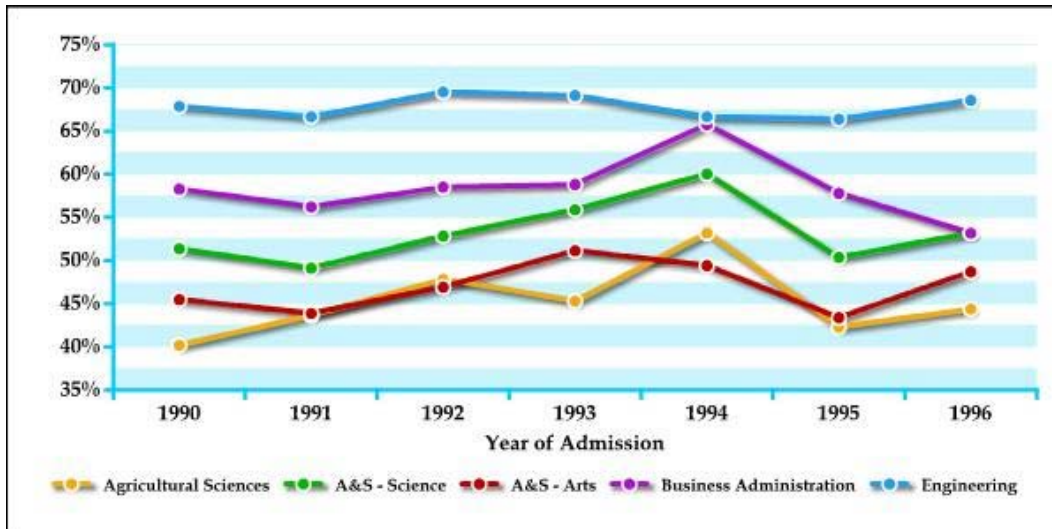
Figure 4. UPRM graduation rates by college of admission: 1990-1996 cohorts completed within 150% of the expected time

Figure 5 depicts a retrospective analysis of the students who obtained a degree between 1995 and 2004 and were originally UPRM freshmen[5]. This figure reveals that, in average, students completing a four-year program take 1.5 years more than what is expected. On the other hand, students who entered the UPRM and completed a five-year program take an average of one year beyond the normal time to completion. Curiously, for both four and five year programs the average time beyond the expected time to completion decreased between the classes of 1995 and 1999. By 2000, the year in which the 1995 cohort would be expected to begin completing their degrees, the average time beyond what was expected began to increase.

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[5] The analysis does not take into consideration the type of program (i.e., 4 or 5 year) the student was originally admitted to or if they had transferred at any time.
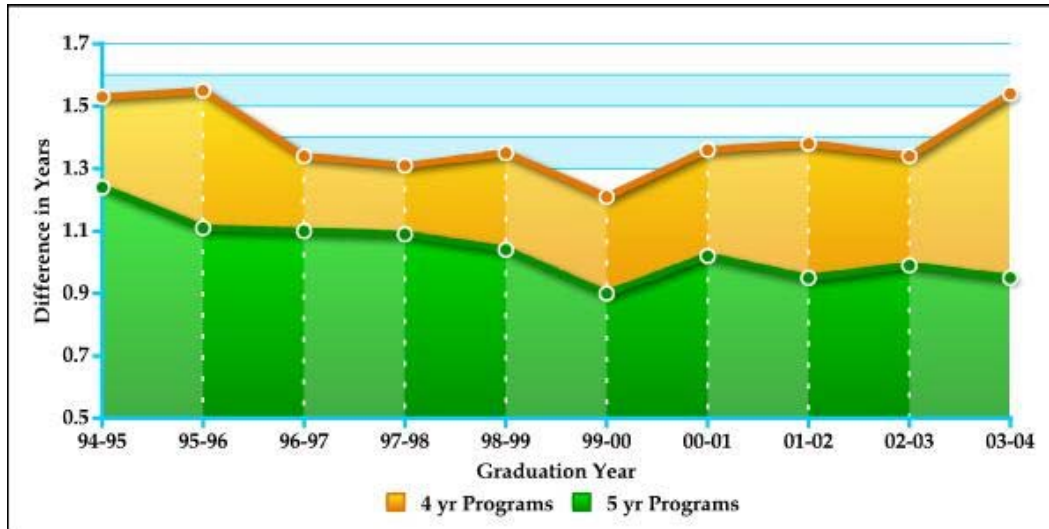
Figure 5. Mean difference between expected and actual time to degrees conferred between 1995 and 2004 by type of program[6]

Many studies carried out by the OIRP and other offices have focused on the UPR undergraduate admission criteria since it is common for all campuses. This criterion is based on the students' high school GPA and their scores on the verbal and mathematical aptitude tests of the CEEB, the combination of which yield a General Application Index (IGS in Spanish). In 1995 the formula was modified, which resulted in a need to evaluate the performance of this cohort and beyond as compared to those cohorts prior to 1995.

General Student Population, Instructional Faculty, and Institutional Resources

Looking at the general student population, as shown in Figure 6, UPRM enrollment was at its highest during the Fall of 1998-1999, decreased between 1999-2000 and 2002-2003, and has remained stable since then. This pattern seems to be a result of the marked decrease of approximately 1,000 undergraduate students between 1998 and 2004, despite an increase in graduate enrollment. The number of non-degree seeking students at our campus has remained relatively stable during the past nine years, although it has exhibited slight fluctuations.

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[6] Analysis contemplates only those students who entered the UPRM as first-time degree-seeking students (i.e., transfer students are excluded)
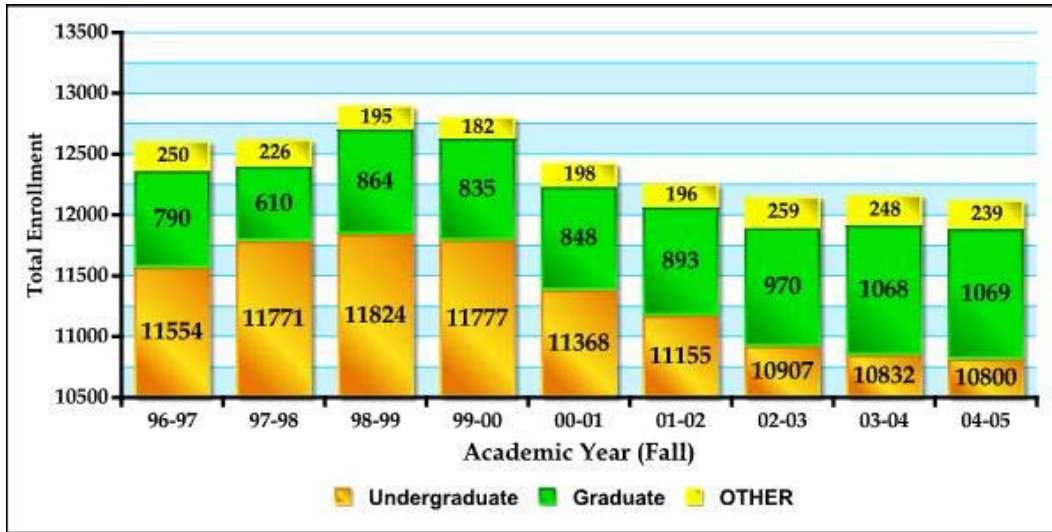
Figure 6. UPRM general enrollment 1996-2004

On the other hand, the number of degrees awarded increased slightly during the past ten years, for both undergraduate and graduate students, except for the last graduation where there was a decrease of 207 undergraduate degrees. This was a result of the decreasing number of first-time freshmen enrolling between 1997 and 2000 (see Figure 7).
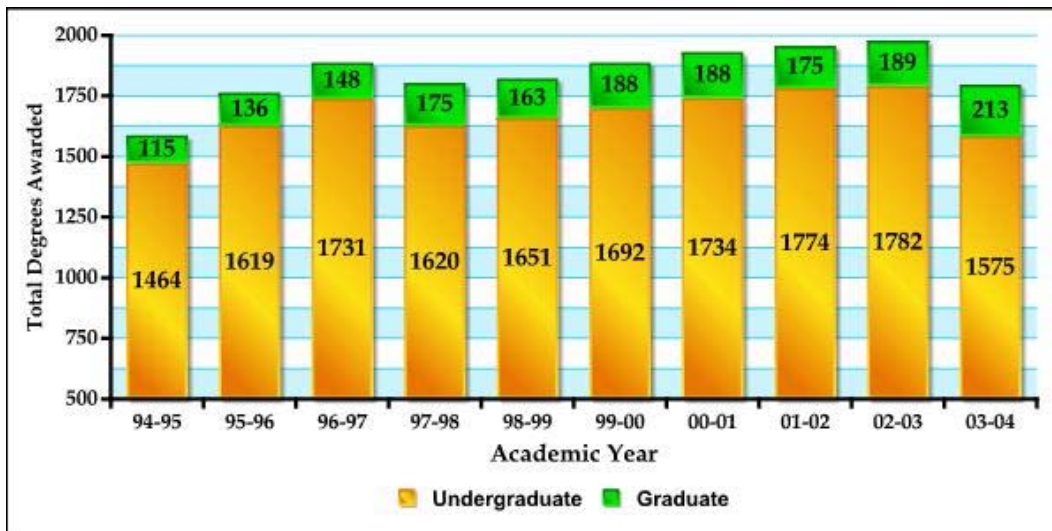
Figure 7. UPRM degrees awarded between 1994-1995 and 2003-2004

Despite an increasing population of graduate students, as evidenced by the enrollment figures and the degrees awarded, which results in a need for faculty members to become more involved in research and publications, the number of instructional faculty members has slightly decreased rather than increased, from 765 members in 1998 to 719 in 2003. Figure 8 demonstrates how this trend is common for all four academic colleges.

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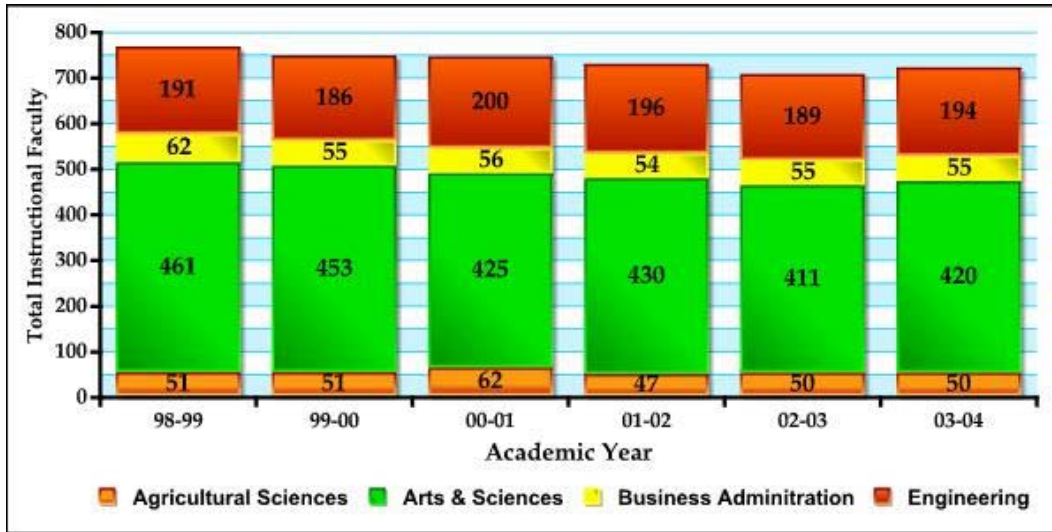
Figure 8. UPRM instructional faculty 1998-2003 by academic college

Finally, as seen in Figure 9, between 1994-1995 and 2003-2004, UPRM's budget as a percentage of the UPR system's general fund decreased from 18% to 16%. While the system's fund increased 72.83% over this time period, from $467,891,080 to $808,674,683, the allocation made to UPRM increased only by 52.05%, from $84,960,459 to $129,181,367[7]. This represents an average yearly increase of 5.78%, which is very close to the inflation rate, to serve among other things, a student population, that has increased from 11,123 in 1994-1995 to 12,148 in 2003-2004. Also, the number of graduate students has increased from 639 to 970.
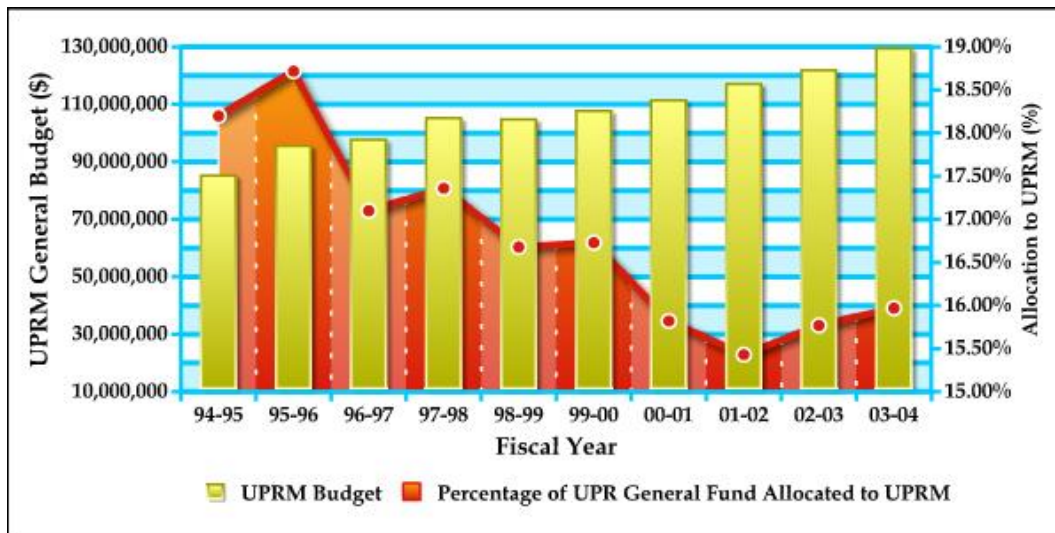
Figure 9. UPRM general budget and the budget as a percentage of the UPR system's general fund

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[7] Excludes the Agricultural Experimental Station (EEA) and the Agricultural Extension Services (SEA) budgets.

INTRODUCTION

The University of Puerto Rico was created by an act of the Legislative Assembly on March 12, 1903. Following the extension of the benefits of the second Morill-Nelson Act to Puerto Rico in 1908, what is now the University of Puerto Rico, Mayagüez Campus (UPRM) began with the establishment in Mayagüez of a College of Agricultural Sciences in 1911 and a College of Engineering in 1913, conjointly known as the College of Agriculture and Mechanical Arts (CAAM). In 1942 the campus was reorganized and given partial autonomy under the direction of a vice chancellor. A division of science, which eventually became the College of Arts and Sciences was created in 1943, and the College of Business Administration was added in 1970. In 1966, the Legislative Assembly reorganized the University of Puerto Rico into a system of autonomous campuses, each under the direction of a chancellor and CAAM became UPRM. Today, UPRM continues its development in the best tradition of a Land Grant institution as a coeducational, bilingual, and nonsectarian institution. This semester, Fall 2004, UPRM has an enrollment of 12,108 students, of which 6,031 (49.8 %) are females, and 1,076 (8.88 %) are graduate students. Among the four colleges, the largest enrollment is in the College of Engineering with 4,824 (39.8 %) students.

The institution's *vision* is to assure that UPRM continues as a leading institution of higher education in Puerto Rico and in the Western hemisphere, responding to the needs of a modern society, in a dynamic and global environment, and in the continuous search for truth, knowledge, justice, and peace. Its *mission*, encompassing its eight strategic goals, is to:

- **Develop educated and cultured citizens, able to think critically and professionally, competent in the fields of agricultural sciences, engineering, sciences, arts and business administration, who can contribute to the cultural, social, technological and economic development of Puerto Rico and collaborate internationally in an environment of solidarity and democracy.**
- **Perform research and creative activities to serve the local, regional and international needs of society.**
- **Provide an exemplary service to the local, regional and international community to contribute to a sustainable and balanced development of our society and disseminate knowledge making it available to all those concerned.**

  The updated *Institutional Strategic Plan*, which evolved as a result of extensive collaboration with the offices of the seven deans and other divisions of UPRM, comprises the eight strategic goals of (1) Leadership, (2) Students and Alumni, (3) Academic Affairs, (4) Research, Creative Work and Graduate Studies, (5) Community and Social Service, (6) Human Resources, (7) Effective and Efficient Administration, and (8) Infrastructure.

The *Institutional Strategic Plan* is based on a system of accountability, and its main purpose is to improve institutional performance. The structure and scope of this plan flows directly from its mission and goals in which the assessment of institutional effectiveness is conceived as part of strategic planning, thus ensuring that assessment activities reflect the mission and goals of the institution and its individual units. At the core of the *Institutional Assessment Plan* is the *Plan for the Assessment of Student Learning Outcomes*, whose primary focus is to improve academic programs and to meet accreditation requirements. Together these plans, as shown in Figure 1, range from being fully implemented to being in various stages of implementation.
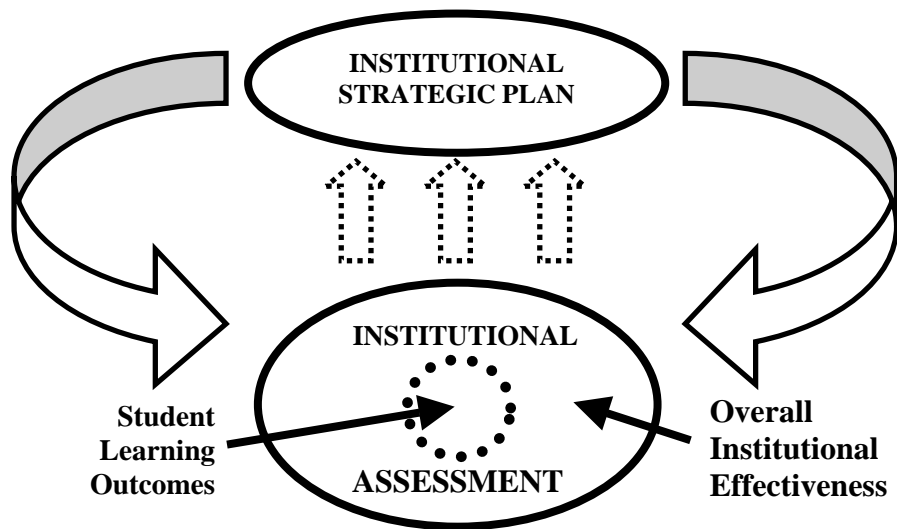
Figure 10. Conceptual Diagram of Strategic Planning and Assessment at UPRM

The *Plan for the Assessment of Student Learning Outcomes* stipulates that by the time of their graduation, UPRM students will be able to:

a) **Communicate effectively.**
b) **Identify and solve problems, think critically, and synthesize knowledge appropriate to their discipline.**
c) **Apply mathematical reasoning skills, scientific inquiry methods, and tools of information technology.**
d) **Apply ethical standards.**
e) **Recognize the Puerto Rican heritage and interpret contemporary issues.**
f) **Appraise the essential values of a democratic society.**
g) **Operate in a global context, relate to a societal context, and demonstrate respect for other cultures.**
h) **Develop an appreciation for the arts and humanities.**
i) **Recognize the need to engage in life-long learning.**

While accreditations serve as external mechanisms to provide quality assurance in education, the larger goal is to move toward internalization of continuous improvement processes across the institution. As part of its 2002 Accreditation Board for Engineering and Technology (ABET) re-accreditation process, the College of Engineering established a permanent System for the Evaluation of Education (SEED) Office. The success of this "pilot project" (all six programs were re-accredited) served as a model in the subsequent creation of an institution-wide Continuous Improvement Educational Initiative (CIEI) Office by the Chancellor. While the direction of the 2005 Middle States Commission on Higher Education (MSCHE) self-study is, without doubt, its top priority at the moment, the CIEI Office, under the aegis of the Office of Institutional Research and Planning (OIIP) has a larger responsibility of conducting regular assessments to bring about data-driven change.   As further evidence of its long-term commitment, UPRM recently entered an agreement to participate in the Building Engagement and Attainment of Minority Students (BEAMS) Project, which is offered jointly by the American Association for Higher Education (AAHE) and the National Survey of Student Engagement (NSSE). With this, we aspire to complement our own internal efforts on enhancing student engagement, learning, and success.

METHODOLOGY

The Self-Study Process

The following tasks were carried out as part of the overall process:

1. Reorganization of the task forces, the coordinators, and composition of the individual task forces with appropriate members, both number-wise and with appropriate backgrounds, so that the collective experience would be more in tune with the standards that were going to be dealt with.
2. Development of a detailed schedule using the program Primavera Sure Trak.
3. Development of charge questions for all standards, and the Self-Study Design for submission to the Middle States Commission on Higher Education (MSCHE) in preparation for the accreditation visit in 2005.
4. Development and implementation of a comprehensive Institutional Assessment Plan, including a separate *Institutional Plan for the Student Learning Outcomes*.
5. Design and development of questionnaires for a campus-wide survey to address the charge questions, and subsequently to help in the development of self-study reports of not only the individual task forces, but also the overall Self-Study Report for the accreditation visit in 2005.
6. Creation of a separate task force to specifically address the issues of importance to the Puerto Rico Council on Higher Education (PRCHE), and the development of a separate report in Spanish.
7. Development and implementation of a comprehensive *Institutional Strategic Plan*.

All listed action items, from 1-6, were undertaken specifically by the UPRM-MSCHE Institutional Steering Team. Action Item 7, on the development and implementation of the *Institutional Strategic Plan*, was handled separately but in cooperation with Task Force 1 (Standards 1 and 2).

Up-to-date Recordkeeping

The UPRM-MSCHE Steering Team agreed very early on the need for maintaining up-to-date records which would be also easily accessible to the team and to the public. For the first time, a dedicated Web site was created (www.uprm.edu/msa) to serve as a repository for all records such as the minutes of meetings and workshops conducted, the assessment plans, the documents, the institutional student learning outcomes, the training and orientation sessions, the results of conducted surveys, the institutional student learning outcomes, and other useful links. The creation of this site has definitely helped in not only keeping the records in order, but also in serving as a strong source of evidence of the institution's efforts towards continuous improvement.

Orientation Sessions across Campus

Bringing about change in an institution requires orienting the constituents. Switching from traditional accreditation criteria, which had been based solely on "inputs" to those which are

outcomes-based, or to simply institutionalize assessment into every facet of the institution, required that the faculty, the staff, and the administrators be made fully aware of this new paradigm. The MSCHE publication *Characteristics of Excellence in Higher Education* (2002) stated quite succinctly on page v that "…., the Commission is aware of the institutional effort and cultural change that the increased relative emphasis on assessment may require." Keeping this in mind, the UPRM-MSCHE Steering Team Coordinator and other Team-members provided numerous orientation sessions on campus during the time period shown in Table 1.

Table 1. Record of Orientation Sessions to the UPRM Community

Date	Activity/Group
April 16, 2003	Chancellor's Leadership Retreat (Deans)
May 9, 2003	Faculty selected to meet with Dr. George Santiago, MSCHE Liaison
May 14, 2003	Dean & Department Directors College of Agricultural Sciences
June 18, 2003	Dean & Department Directors College of Engineering
June 26, 2003	Task Force 2 Members
July 14, 2003	Staff Members from Academic Affairs, Library, ROTC, AFROTC, Graduate Studies, and Extension Division
August 20, 2003	Dean & Department Directors College of Arts & Sciences
August 21, 2003	Faculty Meeting College of Business Administration
September 4, 2003	Faculty Meeting College of Agricultural Sciences
October 7, 2003	Faculty Meeting College of Arts & Sciences
October 9, 2003	Dean of Students, Registrar, and Staff
November 4, 2003	Faculty Meeting College of Engineering
August 6, 2004	Orientation for New Faculty (Organized by the Center for Professional Enhancement, CEP)

Training Workshops

In addition to various other efforts at the individual college levels, the UPRM-MSCHE Steering Team conducted two training workshops, both of which were sponsored by General Motors (GM).

1) <u>Quality Assurance through Continuous Assessment</u> on November 18, 2003 to 69 participants. This workshop focused on the development of an Assessment Plan for the Student Learning Outcomes at the departmental level.
2) <u>Continuous Improvement via Strategic Planning and Assessment</u> on May 7, 2004 to 76 participants. This workshop focused on the development of an Assessment Plan for Administrative Office Personnel

Data Gathering Instruments

The primary method for gathering data for the self-study was a set of 33 custom-designed questionnaires which were administered to the various institutional units. The response rate to these questionnaires is shown in Table 2.

Table 2. Response Rate for Self-Study Questionnaires

No:	Recipient Group	Sent	Received	Response Rate
1	Chancellor	1	1	100%
2	Administrative Board	10	5	50%
3	Elected Senators	26	12	46%
4	Dean of Administration	1	1	100%
5	Dean of Academic Affairs	1	1	100%
6	Dean of Students	1	1	100%
7	Deans of Academic Colleges	4	4	100%
8	Board of Trustees & University Board	1	0*	0%
9	Department Chairs	26	26	100%
10	Office of Institutional Research and Planning	1	1	100%
11	Budget Office	1	1	100%
12	Research Units	2	2	100%
13	Computer Center	1	1	100%
14	Physical Plant	1	1	100%
15	Alumni	1	1	100%
16	Purchasing Office	1	1	100%
17	Finance Office	1	1	100%
18	Human Resource Offices	4	2	50%
19	Admissions Office	1	1	100%
20	Registrar's Office	1	1	100%
21	Student Ombudsman	1	1	100%
23	Academic Counselors	30	22	73.33%
25	Labor Organization Leaders	3	0	0%
26	Graduate Studies	1	1	100%
27	Library	1	1	100%
28	Professional Enhancement Center (CEP)	1	1	100%
29	Program Directors	3	3	100%

30	Agricultural Extension Service	1	1	100%
31	Div. of Continuing Education (DECEP)	1	1	100%
33	Law 51 Committee	1	1	100%

*Questionnaire was returned indicating that the questions did not apply. The questionnaire was revised and sent again in April 2004.

Also, three custom-designed surveys were administered to the three largest groups of campus constituents; faculty, non-teaching staff, and students. In some cases, interviews were conducted after examining the data and determining that there was need for additional information which was not provided for in the questionnaires. The response rate to these questionnaires is shown in Table 3.

Table 3. Response Rate for Self-Study Surveys

No:	Recipient Group	Sent	Received	Response Rate
36	Faculty	746	206	27.61%
37	Non-Teaching Staff	630	286	45.39%
38	Students**	203 class sections	146	71.92%

** Three types of student surveys were administered. These were on (1) Academic Experience (2) Institutional Experience, and (3) Student Services. Class sections were selected proportional to registration in each college, which included students from freshmen level to graduate.

Data Analyses and Report Format

Each task force gathered responses to its questions from the applicable questionnaires. Not all questionnaires included questions from every task force, only as relevant. These were then analyzed and incorporated into eleven comprehensive task force reports prepared in a common format, as outlined on pages 100-101 in the Self-Study Design. These eleven detailed reports serve as backups for the condensed summaries in the final institutional Self-Study Report, which was written as per MSCHE guidelines not to exceed 100 pages. During the joint MSCHE-PRCHE Preliminary Visit on November 4, 2004 it was recommended that the PRCHE report and the MSCHE Self-Study Report should be presented as one document. However, during the UPR-PRCHE Meeting held on December 15, 2004 it was clarified that the two reports would need to be separate because of separate deadline requirements.

Self-Study Dissemination across the UPRM Community

The Self-Study Report has been placed on the Web site (www.uprm.edu/msa) for perusal by the entire UPRM community. Additionally, the highlights of the institutional self-study were disseminated to the UPRM community in eight (8) public meetings as follows:

1. All units under the Dean of Students **(November 5, 2004)**

2. Faculty meeting of the College of Agricultural Sciences **(November 9, 2004)**

3. Faculty meeting of the College of Engineering **(November 9, 2004)**

4. Faculty Meeting of the College of Arts & Sciences **(November 9, 2004)**

5. The Academic Senate **(November 16, 2004)**

6. Faculty Meeting of the College of Business Administration **(November 18, 2004)**

7. All units under the Dean of Administration **(November 23, 2004)**

8. All units under the Dean of Academic Affairs, Chancellor's Office staff, Research Center (CID) and remaining others **(December 8, 2004)**

Standard 1: Mission, Goals and Objectives
Standard 2: Planning, Resource Allocation, and Institutional Renewal

Background

The Self-Study Report on Standards 1 (Mission, Goals and Objectives) and 2 (Planning, Resource Allocation, and Institutional Renewal) reflects the recent changes in MSCHE standards for accreditation. These standards are more clearly defined and illustrated, and they place greater emphasis on institutional planning and assessment including assessment of student learning. The standards also recognize the variety of educational delivery methods and techniques that enable universities to fulfill accreditation standards. Since Standards 1 and 2 are intimately related, Task Force 1 decided to discuss them together.

Chronology of events

This section contains a chronology of major events that have had an effect on the development of strategic planning at UPRM.

- In March 1995, UPRM submitted its 1995 Comprehensive Self-Study Report for the evaluation visit that year. Some of the concerns related to long-term planning stated in this report were
  - There is no central structure to promote the long-term planning. Projects requiring the resources of the entire campus are impossible to formulate, much less enact (p. 29).
  - External political events impact directly on the continuity of planning and the direction of long-range policies (p. 29).
  - UPRM's share in the overall UPR budget has been decreasing, even though its student enrollment has increased vis a vis the total enrollment in the UPR system (p. 43).
  - UPRM needs strategic direction in terms of its stated mission and objectives. A first step in this direction would be a clear-sighted vision of its objectives, stated succinctly and effectively in terms that are measurable (p. 162).
  - There is the ever-present problem of changing administrations and the large proportion of administrators at several levels who for long periods of time are designated as acting or interim and are not fully empowered to direct the important functions of the university (p. 162).
- In 1996 the Office of Institutional Research (currently, Office of Institutional Research and Planning) was to be opened under the Office of the Dean of Academic Affairs. However, this office did not become operational because of a change in administration.
- In 1997 the UPRM Administrative Board approved a new strategic plan, entitled "Towards the Third Millennium," and the goals of UPRM were modified to reaffirm its responsibility toward students, teaching, research, and service to the community. This strategic plan aimed at internationalizing UPRM, developing and strengthening research, obtaining state-of-the-art technology for the entire university, and establishing a master plan to improve and modernize the infrastructure.
- In July 1997 Prof. Antonio Santos-Cabrera was appointed acting chancellor of UPRM.
- In February 1998 Prof. Antonio Santos-Cabrera was appointed chancellor of UPRM.
- In April 1998 Dr. Fred V. Soltero-Harrington was appointed acting chancellor of UPRM.

- In 1998 UPR hired Dr. Jeffrey Seybert, a well-known consultant, to review current data gathering and reporting practices and to propose a model to guide the collection, analysis, and reporting of data at the Central Administration and at all campuses. To accomplish these objectives the consultant conducted a series of interviews and designed an information needs assessment instrument for distribution to appropriate staff. The results of the needs assessment for UPRM and the information collected in the interview were the basis for several recommendations. Because of these recommendations, UPR administrators engaged and completed the following activities during 1998-1999:
  - The Office of Institutional Research (currently, Office of Institutional Research and Planning) started operations.
  - A Title V proposal applying for external funds was submitted.
  - An Institutional Research Steering Committee was formed.
  - A Management Information Systems Steering Committee was formed and a survey was conducted identifying what data should be collected, when, by whom, and for what purpose.
- In 1999 the Office of the President initiated a process to revise the strategic plan of the UPR. All institutions forming part of the UPR system had to work in conjunction with the Central Administration to generate a revised systemic strategic plan that would take into account all the UPR academic units and the changing nature of the Puerto Rican society within a global context. As a consequence, all four academic colleges and the Offices of the Dean of Students, Administration, and Academic Affairs at UPRM developed strategic plans with active participation from the academic community.
- In July 1999 Dr. Zulma R. Toro-Ramos was appointed chancellor. Funds were granted to fund the Title V proposal; however, these funds were not assigned to the Office of Institutional Research (currently, Office of Institutional Research and Planning).
- March 2001. Prof. Pablo Rodríguez was appointed acting chancellor.
- June 2001. UPRM submitted (a year late) its Periodic Review Report 2000 to the MSCHE. Between March 1999 and June 2001, UPRM had five different teams with their corresponding plans to prepare the PRR 2000. In spite of this, widespread participation of the academic community was ensured because each department had a strategic planning committee actively involved in the PRR 2000 efforts. However, the final report
  - Recognized that UPRM "continues to be affected by a general lack of institutional autonomy and by administrative instability," and that a major institutional problem is "the intervention of politics and politicians in the university decision-making process and the Central Administration's micro-management of the institution's affairs" (p. 56).
  - Identified as a critical concern the continuous administrative changes that have affected the development of projects and the long- and short-term strategic planning (p. 69).
- In August 2001 Prof. Marta Colón was appointed by Acting Chancellor Pablo Rodríguez as the Coordinator of the UPRM-MSCHE Team. In preparation for the 2005 MSCHE accreditation visit, self-study committees at both the college and departmental levels were constituted.
- In November 2001 MSCHE accepted the Periodic Review Report and reaffirmed accreditation. Chancellor Pablo Rodríguez made Strategic Plan and Outcomes Assessment a priority and activated assessment and planning committees. However, the deans were instructed to put self-study committees on hold.

- From December 2001 to January 2002, the MSCHE accreditation work schedule was revised. Dr. George Santiago from MSCHE visited the UPRM campus.
- In February 2002 a total of 25 UPRM faculty and 5 staff participated in an assessment institute offered by Penn State's National Center for Post-Secondary Teaching, Learning, and assessment program (NCTLA) in San Juan.
- From March to April 2002, three workshops on outcomes assessment were offered to coordinators in the College of Arts and Sciences. A proposal was developed to restructure the Office of Institutional Research and Planning. Chancellor Pablo Rodríguez approved it and requested its implementation. Assessment workshops were given to the faculties of the Mathematics and Nursing departments.
- In May 2002, a two-day assessment workshop was organized for UPRM faculty and staff with speakers from Penn State's NCTLA.
- In June 2002, Prof. Marta Colón participated in the annual American Association for Higher Education (AAHE) Conference in Boston.
- In August 2002, Dr. Jorge I. Vélez-Arocho was appointed chancellor of the UPRM.
- In November 2002, Professors Ivonne Santiago, Roberto Vargas, Mabel Ortíz, and Antonio González-Quevedo attended the Assessment Institute organized by the Center for the Study of Education of The Pennsylvania State University.
- In January 2003, Dr. Anand D. Sharma, Special Assistant to the Dean of Engineering, was appointed by Chancellor Vélez Arocho as the new Coordinator of the UPRM-MSCHE Institutional Steering Team. Dr. Sharma had lead the ABET accreditation efforts for the six undergraduate engineering programs in accordance with the new outcomes-based Engineering Criteria 2000. He also had directed the newly created System for the Evaluation of Education (SEED) office in the College of Engineering.
- In February 2003, the current UPRM-MSCHE Steering Committee was formed. Task force leaders and members were selected. Eleven task forces were created to address the fourteen Standards of Excellence.
- From March 2003 to December 2003, UPRM-MSCHE Steering Team worked on the development of a plan to prepare the 2005 UPRM Comprehensive Self-Study Report.
- From May to December 2003, UPRM community revised and discussed the UPRM Strategic Plan.
- In September 2003, UPRM submitted to MSCHE a follow-up report that documented the development and implementation of the *institutional strategic plan* (approved in 1997), and the development and implementation of a comprehensive outcomes assessment plan including student learning outcomes. In response to this follow-up report, MSCHE requested that, in preparation for the 2004-2005 evaluation visits,
  - UPRM documents "further development and implementation of a comprehensive long-range strategic plan which links long-range planning to decision-making and budgeting processes and includes timelines, priorities, assignment of responsibilities, and financial implications."
  - UPRM starts a "plan for the assessment of institutional effectiveness and student learning and evidence that student learning assessment information is used to improve teaching and learning."
- In January 2004, a new UPRM Strategic Plan was approved by the Academic Senate.

- From January to May 2004, Task Force 1 gathered and analyzed institutional data in preparation for the self-study report.
- During the Summer 2004, Task Force 1 wrote its report.
- From August to September 2004, the Steering Team developed a draft of the 2005 UPRM Comprehensive Self-Study Report.
- October – December 2004. Draft of the 2005 UPRM Comprehensive Self-Study Report is presented to the community for comments via presentations and through the Web site.
- December 2004 – January 2005. Steering Team incorporates comments from the community and finalizes the 2005 UPRM Comprehensive Self-Study Report.

Findings

The organization and mission of the entire University of Puerto Rico system are based on the University Law approved on January 20, 1966, and amended on June 16, 1993. The mission of the UPR system has not been altered since 1966. The mission of the UPR system is

> *Given its function of serving the people of Puerto Rico, the primary mission of the University of Puerto Rico is to increase knowledge through the arts and sciences, and to contribute to the development and enjoyment of the ethical and aesthetic values of society. To accomplish this mission, the University works towards cultivating a love of knowledge; encouraging the search for and constant discussion of truth; preserving, enriching, and spreading the cultural values of Puerto Rico; promoting students complete development as human beings in carrying out their responsibilities as servants of their community and society; maximally developing the intellectual and spiritual wealth latent in the people; and contributing and participating, within the limits of the academic community, in the study and search for solutions to the problems of Puerto Rico.*

As a comprehensive university in the UPR system, UPRM, as the only Land Grant Institution in Puerto Rico, helps fulfill this mission with the support of its four academic colleges: Agricultural Sciences, Engineering, Arts and Sciences, and Business Administration, with the guidance and support of the offices of the deans of Academic Affairs, Student Affairs, and Administration, and the Chancellor's Office. The Land Grant concepts of instruction, research, and service to the community are present in all the four academic colleges. In recent years, the UPRM Land Grant mission has been augmented by its additional designation as both a Sea Grant (1989) and a Space Grant (1992) institution.

In 1997, the stated mission of the UPRM was

> *Within the philosophical framework established by the University of Puerto Rico Act, the Mayagüez campus directs its efforts toward the development of educated and cultured citizens and professionals qualified to contribute efficiently to the cultural, social, and economic development of Puerto Rico. Our learning process provides our graduates with a solid education in the fields of business administration, agriculture, the social and natural sciences, the humanities, and engineering. Our graduates have the skills and knowledge to participate effectively in the solution of problems that affect our society, to promote the arts and the development and transfer of technology, and to defend the values of a democratic society.*

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To achieve this mission, the Mayagüez campus established nine primary goals, as stated in the Administrative Board's Certification No. 96-97-603. Significantly, these goals were student-centered and were established to contribute to the professional development and growth of its students. The goals were

1. To have students become the central figures and the "reason for being" of UPRM.
2. To have the UPRM become an integral institution characterized by excellence in all its components (e.g., teaching, research, and service to the community).
3. To encourage an entrepreneurial spirit among its students.
4. To internationalize the institution.
5. To strengthen research and development.
6. To promote a complete computerization within the UPRM.
7. To evolve into an institution that is operationally agile, efficient, and auditable.
8. To encourage close collaboration with and provide ample service to the community.
9. To establish a Master Plan with a focus on infrastructure and physical installations.

In 2003, UPRM, as part of its activities to support institutional renewal, began a revision of its strategic plan, mission, and objectives. In January 2004, this revision process led to the adoption of a new strategic plan by both the Academic Senate and the Administrative Board. Furthermore, the Academic Senate (Academic Senate Certification No. 04-01) recommended that the UPRM administration:

- Communicate the strategic plan to all personnel and gives it to all new hires.
- Design a graphical display showing the main components of the strategic plan and their relationship.
- Publicize both the mission and vision of the UPRM in all administrative offices.
- Develop an operational plan and its corresponding budget and an organizational structure that guarantees the implementation and the continuous assessment and adjustment of the strategic plan.

The new UPRM Strategic Plan includes the following vision and mission statements:

Vision

To become a leading institution of higher learning in Puerto Rico and throughout the entire American hemisphere while responding to the needs of a modern society within dynamic and diverse surroundings while searching unceasingly for truth, knowledge, justice, and peace.

Mission

1. *To form educated, cultivated citizens capable of critical thinking and professionally prepared in the fields of agricultural sciences, engineering, natural sciences, humanities, arts, and business administration capable of contributing to the educational, cultural, social, technological and economic development of Puerto Rico and of the international community within a democratic and collaborative framework.*
2. *To promote research and creative endeavors to meet the needs of our local and international society while preserving, transmitting, and advancing knowledge.*
3. *To provide excellent service that will contribute to the sustainable and balanced development of our society.*
4. *To share knowledge so that it becomes accessible to all.*

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This strategic plan provides strategic directions in eight critical areas:

1. **Leadership**
   • Become leaders within the teaching-learning process.
   • Internationalize the Institution.
   • Implement a strong planning process.
   • Develop permanent assessment structures to support decision-making processes.
   • Develop a continuous improvement process.
   • Integrate both planning and budgeting processes.
   • Make UPRM'S presence more evident among local, national and international communities.

2. **Students/Alumni**
   • Provide outstanding student support services
   • Form motivated students who are committed to excellence and social responsibility.
   • Fully develop student potential.
   • Bring about student involvement in UPRM activities and fully develop leadership skills.
   • Attract and register the best first-year students.
   • Retain students until they complete their degrees.
   • Strengthen bonds with UPRM alumni.

3. **Curriculum, learning and teaching**
   • Offer updated academic offerings.
   • Improve and innovate teaching - learning processes.
   • Increase the number of excellent academic and professional graduate offerings.
   • Promote entrepreneurial spirit and initiatives among all students.
   • Improve continuous education offerings.

4. **Investigation, creative activities, and graduate studies**
   • Achieve greater research endeavors.
   • Develop research funding lines in support of Puerto Rico's technological, economic and social development.
   • Establish collaborative efforts within the UPRM system and with other universities in and outside Puerto Rico.
   • Strengthen efforts in the search for external funding sources.

5. **Community Service and Social Outreach**
   • Broaden publication and promotion of research, creative, and service activities.
   • Promote close collaborative efforts and broader community services.
   • Promote community and institutional initiatives leading to community development.

6. **Human Resources**
   • Develop a college atmosphere which fosters good communication and iumproves cultured awareness.
   • Attract and retain the best human talent.

- Educate and train employees to keep them updated on pertinent work-related knowledge and skills.
- Strengthen employee diversification and cross-training.
- Develop objective evaluation systems for the assessment of human resources.
- Develop motivation, promotion and rewards to stimulate commitment and excellence.

7. **Effective and Efficient Administration**
   - Self-evaluate, criticize, and learn from experience.
   - Establish a university which is operationally agile, efficient, and capable of being audited.
   - Promote the establishment of technologies to facilitate all processes.
   - Continually evaluate and improve faculty support systems.
   - Re-design core processes.

8. **Infrastructure and heritage**
   - Review the master infrastructure and physical facilities plan.
   - Update the continuous permanent improvement program.
   - Update educational technology and information systems.

This information shows that UPRM has a strategic plan and vision and mission statements that clearly define its purpose within the UPR system of higher education. This is a major accomplishment when compared with our situation ten years ago ("... UPRM needs strategic direction in terms of its stated mission and objectives," 1995 Comprehensive Self-Study Report). The bulk of this effort has been accomplished in the past two years. The UPRM strategic plan includes timelines, priorities, and assignment of responsibilities. The eight critical areas are consistent with the mission and they have significantly focused on student learning (see Standard 14: Assessment of Student Learning) and institutional improvement (see Standard 7: Institutional Assessment). The strategic plan clearly explains whom UPRM serves and benefits and what UPRM proposes to attain. Moreover, the institution's governing bodies (Administrative Board and Academic Senate) developed and recognized the mission, strategic directions, and eight critical areas, and they have declared their intention to use them to develop and regulate UPRM programs and practices and to assess UPRM effectiveness. Since the highest academic and administrative bodies of UPRM have approved these documents, one can conclude that the stated goals and objectives are consistent with the aspirations and expectations of its main constituencies.

The 1995 Comprehensive Self-Study Report stated "There is no central structure to promote the long-term planning ..." (p. 29). Today the structure is already in place. The Office of Institutional Research and Planning is under the direct supervision of the chancellor and among its functions are institutional research, strategic planning, and physical planning. Therefore, this office has played a key role in the implementation of the goal of establishing a master plan with a focus on infrastructure and buildings. The office has a building and infrastructure master plan that is used as a guide for the development of the campus in terms of new buildings and building renovations, and in the implementation of traffic, safety, and environmental quality measures.

Unfortunately, political events have continued contributing to the problem of changing administrations and to the large proportion of administrators who for long periods are designated as acting and are not fully empowered to direct the important functions of the university. From 1994 to the present, there have been six different chancellors. This administrative instability has directly affected the continuity of planning and the direction of long-range policies. This issue is further addressed in Standard 4 (Leadership and Governance) and Standard 6 (Integrity).

Task Force 1 wanted to assess how effectively the UPRM administration has communicated the mission and goals to faculty, administration, staff, and students. It was also interested in finding out whether the mission, goals and objectives have been discussed openly and frequently (both at the college and departmental levels) to respond to internal and external challenges. First, both strategic plans (1997 and 2004) are available to the UPRM community and to public in general at the Web sites (http://oiip.uprm.edu/pest.html) and http://www.uprm.edu/msa. The mission and the nine primary goals of the 1997 strategic plan are also included in the *Undergraduate Catalog*. UPRM distributes this catalog to all incoming first year students and, every year, to all full-time faculty members. The latest edition of the catalog is also available on line at the Web site (http://www.uprm.edu/catalog/UndergradCatalog2004-2005.pdf.) At the college and departmental levels, student representatives have been routinely invited to strategic planning committee meetings, but their participation has been scarce and erratic. Moreover, there is not much evidence that students have actually read and assimilated the institutional mission and goals. In February 2004, the UPRM - MSCHE Institutional Steering Team conducted a survey of UPRM students; 1060 students out of 12,148 (from randomly selected course sections) responded. The survey instrument included a statement on institutional mission and goals. Students responded on a four-point Likert scale. Overall, only 63.64% of the respondents agree or strongly agree with the statement "I have been provided with information regarding the mission and goals of the institution." These findings demonstrate that the administration has been moderately successful in communicating the mission and goals of the UPRM to students.

On the other hand, the overwhelming majority of the faculty and administrators of all academic colleges have discussed both strategic plans (1997 and 2004). During 2004, the Academic Senate Certification 04-01 has been the working document for the development of the strategic plans of the colleges and their departments. Most of the faculty has been exposed to the mission and goals during the process of revision of the 2004 UPRM Strategic Plan and during the development of their own departmental strategic plan. Evidence of these discussions can be found in the minutes of the departmental and faculty meetings (in many cases extraordinary meetings to discuss strategic planning) and minutes of the directors' meetings.

In November 2003, the UPRM - MSCHE Institutional Steering Team conducted a survey of the UPRM teaching faculty (746) of which 200 (26.8%) responded to the survey. The survey instrument included six statements on institutional mission and goals. Faculty members responded on a four-point Likert scale. Overall, almost 88% of the respondents agree or strongly agree with the statement "I am familiar with the institution's stated mission and goals." Overall, 57.43% of the respondents agree or strongly agree with the statement "I am aware of the specific initiatives that are in place to familiarize members of the institution with its mission and goals." Overall, 53.03% of the respondents agree or strongly agree with the statement "I am aware of the

specific procedures to implement the mission and goals of the institution." Only 41.42% of the respondents agree or strongly agree with the statement "The institution has created a community environment in which all of its members are encouraged to carry out the UPRM mission and goals." Only 34.34% of the respondents agree or strongly agree with the statement "The institution has created a community environment in which all of its members are supported in carrying out the UPRM mission and goals." Overall, 64.15% of the respondents agree or strongly agree with the statement "The information disseminated by the university is consistent with its stated mission and goals." An analysis of all these responses by academic college shows that the distribution of the responses is similar in all colleges. These findings demonstrate that the administration has been successful in communicating the mission and goals to faculty; however, a majority of those that responded to the survey believes that the UPRM administration should do more in creating a community environment in which all of its members are encouraged and supported to carry out the UPRM mission and goals.

In November 2003, the UPRM - MSCHE Institutional Steering Team conducted a survey of the UPRM staff (643 non-faculty personnel) of which 282 (about 43.7%) responded to the survey. The survey instrument was written in Spanish and included, among others, five statements on institutional mission and goals. These statements are similar to those submitted to the faculty. Staff members also responded on a four-point Likert scale. About three quarters of the respondents reported being familiar with the mission and objectives of the UPRM; however, only about half of them reported being aware of the initiatives to familiarize the non-faculty personnel with the mission and objectives of the institution. Similarly, only half of the non-faculty personnel were aware of the existing procedures to implement the mission and institutional objectives of the UPRM. Two thirds of the respondents reported that the information communicated by the institution is consistent with the mission and objectives of UPRM; however, only 39% of them believed that there is an environment that motivates and supports everybody to carry out the mission and objectives.

Addressing how the mission and the goals of UPRM guide decisions related to planning and resource allocation requires an understanding of the budgeting process. The University of Puerto Rico is a system composed by a Central Administration and a series of campuses and colleges. The Puerto Rican Legislature approved in 1966 a "formula" by which 9.67% percent of the internal revenues of the government of Puerto Rico are assigned to the UPR. This process gives the UPR system fiscal autonomy. However, the Central Administration controls the use and allocation of this budget and is responsible for its distribution. Despite UPRM budget plans and requests, the increases in its operational budget essentially have only accounted for the increases in salaries and fringe benefits. On occasions, the Central Administration of the UPR system has dispensed additional funds for improvement of academic programs and other initiatives. Furthermore, according to the UPRM Budget Office, from 1998-99 to 2003-2004, the operational budget has been reduced by almost $10 million. Task Force 1 believes that these budget reductions have imposed restrictions on how much the mission and the goals of the UPRM have guided resource allocation, and on how much resource allocation has been linked to strategic planning. Moreover, this budgetary situation is partially responsible for the large variability among colleges and offices in the way they make decisions related to planning, resource allocation, and program and curriculum development.

Finally, Task Force 1 found it very difficult to document that long-range strategic planning has been linked to day-to-day decision-making and to the budgeting process during the last ten years. Part of the complexity of the issue is that, with the current accounting system, administrators find it extremely difficult to report on resource allocation according to the priorities defined by the strategic plan. The current accounting system can easily report how much money a particular administrative unit (college or department) has spent on, for example, travel; however, it is very complicated to get a breakdown of how much of that travel money has been spent on any of the eight critical areas. In order to answer questions such as "Was the travel money spent to support the internationalization of the university? Or was it spent on strengthening ties with alumni?" one has to go through the paperwork records of each individual travel order.

Recommendations
The findings of this task force show that UPRM has a strategic plan and vision and mission statements that clearly define its purpose within the UPR system of higher education. The eight critical areas are consistent with the mission and they have significantly focused on student learning and institutional improvement. Moreover, the current administration has successfully engaged the academic community in institutional and strategic planning. The institution's colleges and governing bodies endorsed and recognized the mission, the strategic directions, and the eight critical areas, and they have declared their intentions to use them to develop and regulate UPRM programs and practices and to assess UPRM effectiveness.

Although UPRM has established conditions and procedures under which its mission and goals can be realized, this process is not finished. Consequently, Task Force 1 recommends that, in 2005, the UPRM administration completes the institutionalization of the strategic-planning process so that it is no longer a "new" thing but becomes accepted as part of the institution's modus operandi. This process needs to be sustained so it continues guiding UPRM administration, governing bodies, faculty, and staff in all decisions related to strategic planning, resource allocation, and curriculum development. Three existing offices are key to this institutionalization process: (1) The Office of Institutional Research and Planning, (2) the Budget Office and (3) the Continuous Improvement Educational Initiative. Their directors should provide an integration and institutionalization plan for these offices to the chancellor and administrative board before the end of the 2004-2005 academic year. Providing these offices with career personnel and adequate financial resources will serve as a palliative for the frequent turnovers at the administrative level.

For UPRM to improve its current planning and resource allocation process, it is necessary to improve its current accounting reporting system. The lack of a reporting system that links expenses to the eight critical areas makes the planning and improvement processes more difficult and complicates the communication, documentation, and assessment of the results. Moreover, an improved reporting system will provide (1) the means to assure accountability and (2) an objective and quantifiable record of institutional improvement efforts. Task Force 1 recommends that, before the end the 2004-2005 academic year, the Office of Institutional Research and Planning and the Budget Office jointly appoint a task force to address this issue and to define metrics to assess the degree of compliance with goals established in the strategic plan. A reporting and assessing system should be operational by 2007.

Standard 3: Institutional Resources

Background
The effective use of resources is crucial to institutional performance; thus resource allocation should reflect institutional priorities. Task Force 2 was created to evaluate the allocation of institutional resources in conjunction with the planning process and to assess how effectively the financial, human, technical, physical and research resources allocation process supports the mission, goals, and objectives of the Institution.

The 1995 MSCHE Report pointed out the following weaknesses:
- *More efforts are needed in the areas of strategic planning and outcomes assessment.*
- *The lack of continuity in leadership continues to be problematic.*
- *An effective training program is needed for administrators and faculty.*
- *Teaching loads, salary scales and the performance appraisal system should be revised.*
- *Improvement is needed in planning, budgeting, and coordinating computer technology resources to have a more efficient information system.*
- *Auxiliary enterprises are losing significant sums of money.*
- *Maintenance has been hampered by insufficient resources.*
- *Improvements or additional space is needed in the Student Center, the Coliseum, the athletic field, and the band and orchestra facilities; a new theater and fine arts center is also needed.*
- *Parking is one of the most serious problems faced by the campus.*

The self-study analysis demonstrates that since 1995 the institution has made efforts to address those weaknesses, although some of them are still present.

Findings
Based on the fundamental elements of institutional resources (Standard 3), Task Force 2 developed questionnaires, which were administered to academic colleges and administrative offices. Responses were used as the primary source of information to prepare the Self-Study Report. The findings of the Task Force 2 are summarized here and as evidence, in-depth data to support these findings are available in the comprehensive Task Force 2 Report.

Financial Resources
The Mayagüez Campus receives a budgetary allotment of approximately 18% of the UPR general fund, but it provides services to nearly 17 % of the total UPR system enrollment. This budgetary allotment provides an operating budget that does not meet the actual needs of academic colleges and administrative offices. The Resource Allocation Plan established by the Central Administration instructed the campuses to redistribute their operational budgets without giving them the opportunity of submitting budget requests for additional funds.

If real projections are to be met, millions of dollars in additional recurrent funds must be assigned to UPRM. Since those funds are not available, all institutional resources are seriously affected and, as a result, some projects within the development plans have been postponed while others have been funded. Furthermore, from 1989-90 to 2004-05 the UPRM operational budget

has been reduced by $14.4 million. Although this has led to a precarious economic situation, the Budget Office monitors the use of institutional resources and provides institutional control so that the campus completes every fiscal year with a balanced budget.

The university enterprises are still not profitable and to operate they depend on financial subsidies from the institution.

The institution receives important donations from companies, foundations, and private organizations, but there is a lack of a strategic plan for fundraising with no tradition of alumni participation in fundraising campaigns and donations.

All internal audits conducted since 1995 by the Office of Internal Auditors have not identified any significant negative findings.

Planning Process
The campus has a strategic plan designed to provide a vision and framework to direct the growth of the campus for the next twenty-five years and beyond. It places appropriate priorities on classrooms and teaching facilities in accordance with institutional goals. Nevertheless, since its approval in 1996, it has not been reviewed for effectiveness and appropriateness.

Almost all academic colleges and administrative offices have developed strategic plans in accordance with the *Institutional Strategic Plan*. UPRM has taken significant steps to assure that its efforts are directed to accomplish its mission and goals, but more efforts are needed in the budgeting process, which is not aligned to the planning process.

Human Resources
UPRM continues to confront frequent turnover at all administrative levels. Its high bureaucratic administrative structure limits operations and services. The institution has not been able to adopt the newly designed model for the performance appraisal of administrative personnel. The evaluation process for faculty tenure and promotion is not uniform and the modules used for evaluation are outdated.

On the other hand, teaching and student services are provided by diversified and qualified personnel, although low salaries have generated problems in the recruitment and retention of highly qualified faculty, researchers, and support staff. Employees are provided with opportunities to continue their professional development. In 1997 the Center for Professional Enhancement (CEP, abbreviation in Spanish) was created with the mission to expose the teaching personnel to diverse strategies, methods, and educational techniques that promote academic excellence from a perspective of effectiveness and quality in education.

Technical Resources
UPRM has a strategic plan for information technology, which supports the integration of technology in the classroom and distance learning initiatives. Colleges have developed innovative distance learning initiatives. Nevertheless, more coordination and a campus-wide policy for the acquisition of technology equipment and software are needed. In 2003 the Institute of Educational Development and Learning on Line (acronym in Spanish - IDEAL) was created to address necessities regarding on line education. IDEAL's objective is to assist the

teaching staff to integrate the use of information technologies and communication into their courses.

Technology and communication infrastructure have been updated and substantially improved with the installation of fiber optics. The hardware has also been updated and increased and a web page created, despite the fact that UPRM does not have significant human resources assigned to support Information Technology.

Physical Resources
The infrastructure is being continuously developed and renovated to improve services offered to the entire academic community; physical barriers have been removed and wider access has been provided. The ongoing projects (Monzón, Biology, and Business Administration buildings) have expanded academic and research facilities and provided up to date physical resources. The remodeled building of the Office of the Dean of Student Affairs will allow all student services to be located in the same place. In general, the campus has adequate classrooms, modern research laboratories, important physical facilities for informal education, and adequate technological facilities for administrative and educational use.

UPRM has established a system to encourage the use of mass transportation to facilitate the transportation from parking areas to the main campus, but parking is still one of the most serious concerns faced by the university community. There are also serious space limitations in terms of offices for faculty and administrative services, research, and a need for an auditorium. Staffing of the Building and Grounds Department is not commensurate with the need to maintain new facilities being constructed.

Research Resources
UPRM has placed a strong emphasis on research, and indicators have been established to optimize the limited resources. Since 1995, the research output has increased substantially, but additional efforts are needed to obtain external funds.

General Findings
In general terms, the findings demonstrate that UPRM complies with some important characteristics of excellence. Although more effort is needed to recruit specialized faculty and technology support staff, the campus has adequate personnel to support its mission and outcomes expectations. There is a comprehensive infrastructure master plan appropriate to its mission and there is evidence of its implementation. Learning resources fundamental to all educational and research programs are adequately supported and staffed to accomplish the institution's objectives for student learning, both on campus and at a distance. Educational and other equipment acquisition process is appropriate to the teaching programs and support services. Also, annual independent audits are conducted which confirm financial responsibility.

The campus needs to make additional efforts to comply with some other characteristics of excellence. Additional strategies to measure the efficient use of institutional resources need to be adopted. For example, the budget process is not completely aligned with the institution's mission, goals, and strategic plans; additional institutional controls must be developed to deal with financial, administrative, and auxiliary operations; rational and consistent policies and

procedures need to be in place to determine allocation of assets; and periodic assessment of the effective and efficient use of institutional resources is needed.

Recommendations

Financial Resources
1. The operating budget should be increased. UPRM should submit a formal petition to the President and the Board of Trustees so that a fixed percent of the general UPR income will be forwarded to UPRM for a period of no less than six years. The percent should be revised and increased if necessary. This formula should be reviewed periodically based on the UPRM development plan and on an assessment of the goals attained. Budgeting control processes and fiscal regulations should be revised so that more flexible policies may be implemented to generate income for UPRM.
2. The possibility of increasing the tuition should be seriously evaluated.
3. More aggressive and structured fundraising campaigns should be conducted more regularly.

Planning Process
The long-range planning efforts should be maintained and continuously improved.

Human Resources
1. Promotion and evaluation criteria for faculty must be created and/or revised through the development of an effective performance appraisal system.
2. UPRM should enforce an aggressive plan for the recruitment and retention of well-trained specialized personnel and talented faculty.
3. Administrative turnover must be studied and controlled.
4. The recruitment of new faculty members with doctoral degrees is imperative to support both undergraduate and graduate programs.

Technical Resources
1. More qualified technical staff should be recruited and their salary scales revised.
2. A campus-wide policy for the development, coordination, and upgrade of technology resources should be adopted.

Physical Resources
1. A strong preventive maintenance program must be initiated and institutionalized, and more funds allocated for the maintenance of facilities.
2. Long-term planning for facility improvements is necessary.
3. New strategies and initiatives are needed to alleviate the parking situation. The original parking system of small lots can no longer support the present demands. Additional remote parking facilities should be identified, and the mass internal and external transportation system should be strengthened.

Research Resources
1. In order to stimulate the continued growth and development of research initiatives, it is necessary to provide adequate infrastructure, support services, and additional formal training in writing proposals for obtaining external funds. Teaching overloads must also be reduced.
2. Several niches, or cluster groups, must be identified to direct and to concentrate research efforts and a long-range strategic plan for research should be institutionalized.

Standard 4: Leadership and Governance
Standard 5: Administration

Background

The University of Puerto Rico (UPR) receives funds from the Commonwealth of Puerto Rico based on an established formula, as stated in Law Number 2 of January 2, 1966, as amended. These funds represent 9.6% from the average of the Commonwealth General Fund internal tax revenues from the last two fiscal years, ending on June 30. Besides, the UPR receives additional funds from other government financial activities to maintain specific University Programs, for example, student financial aid, medical education training, buildings repair and renovations, and infrastructure for research and development.

In the past years, the formula provided additional funds to continue with the incremental trend of the UPR annual budget. These funds were then allocated to the campuses, to budget the new fiscal year expenses. In the event of insufficient incremental revenues to cover the new expenses, as has happened over the past three years, the UPR requested more funds from the Commonwealth of Puerto Rico and implemented the internal reallocation of the recurrent base budget of all campuses. Through these processes, the use of every dollar and the relevance of each activity were evaluated. All funds reallocated from the recurrent base budget of the campuses were matched to equal the amount of new expenses.

These operational budget decisions were implemented to maintain the commitment of the UPR and the Commonwealth of Puerto Rico with providing access to low-income students to the higher education experience. As well, each campus is involved in fund-raising activities to obtain external funds from corporations, alumni, individuals, foundations, local government agencies, and federal programs. The purpose of these funds is to diversify research, to support and strength academia and cultural activities, and to establish an endowment fund in each campus. The UPRM campus had an aggressive plan in this fund-raising agenda; as a result, increased external funds were received in comparison with past fiscal years.

Planning processes are fundamental in order to assure the achievement of the shared and individualized institutional vision of the UPR System units, as well as for the renovation and continuous improvement of the University's academic offering, research, and service. In September 1996, the UPR approved its *Systemic Strategic Plan* (PLES, its Spanish abbreviation) as established by Certification Number 25-1996-97 of the Board of Trustees. This Plan defined the strategic areas that represented challenges and opportunities for the University. From that moment on, and guided by the PLES, each one of the units of the UPR created, approved, and implemented its own plan. However, the academic, administrative, technological, social, and cultural changes, among others, made it essential to revisit this PLAN, and an in-depth glance has produced the establishment of new strategic areas and the reformulation of priorities.

In November of 2001, the new President of the UPR, Antonio García Padilla, Esq., presented his Administrative Academic Plan for the University of Puerto Rico. This Plan, which had been presented to the Academic Senates of the different units before the selection of the President, was discussed individually and jointly with the chancellors. It was also submitted to an exhaustive analysis to make sure it was in accordance and consistent with the PLES, in order to

guarantee institutional continuity. The areas that are part of the planning were presented in an operational form; the work plans of the offices attached to the President's Office were integrated, the areas contained in the work plans of the campuses were incorporated, the Plan was tempered to contents of the internal and external environment, and as a result, the *Agenda for Planning in the UPR* was produced.

The document *Agenda for Planning in the UPR* aims to guide the planning efforts in the System and to define the areas of institutional behavior that will be the object of evaluation in the next years. It is driven by a vision of institutional promotion for the second century of the University that is based on three mobilizing axes:

- Generation of knowledge and technology with regard to growing parameters of global competitiveness; to increase the indexes of international exposition of the university production and the divulgation in scientific forums and publications; to collaborate through academic production with desirable developments in the social and cultural areas.
- Optimization in the funding and use of technology that translates to a more efficient institution in its administrative, managerial, service, research, cultural, and teaching-learning processes.
- Substantive improvement of the quality of life in university spaces in order to provide physical, administrative, social, and cultural environments that lead to institutional excellence, creativity, and to the promotion of democratic values and conducts, of cooperation and community service, of ethical sustenance, and appreciation for diversity.

The Agenda shall be distributed among the Academic Senates during the month of January 2005 for the corresponding discussion, dialogue, and recommendations. Afterwards, it shall be discussed by the University Board and the Board of Trustees.

The budget request drafted by the institution up to the summer of 2002, which included a budget reallocation of 2.36%, was based on the approval of the PLES. Beginning in the summer of 2002, the Office of the President of the University of Puerto Rico did not allow for budget requests, but rather determined to manage the budget by line expense; this includes a budget internal redistribution to cover the increase in expenses for the new fiscal year. During 1999, the budget reallocation was 2%; in the summer of 2002, about 2.36%; in 2003, it was 0.93%; and 1.61% for the summer of 2004.

Section II of the MSCHE Evaluation Team's Draft Report to the Faculty, Administration, Trustees, Students of UPRM, following the campus visit on March 26-29, 1995 titled GOVERNANCE, ADMINISTRATION AND PLANNING started with the following comments:

> *As the Self-Study report indicates, Middle States evaluators both now and in the past have been aware of "the idiosyncrasies and nuances of Puerto Rican politics and its effect on the university." That the University of Puerto Rico at Mayaguez has had six (6) chancellors in the past ten (10) years* [referring to the period 1984-1994] *and similar changes in other administrative officers is, if*

nothing else, inimical to long-range planning, administrative effectiveness and campus morale. As the Self-Study states "Selection of administrative officials, including the Chancellor, deans and department directors, often depends on their political ideologies and ties to the political party in Puerto Rico." We believe that the entire public system of higher education together with the help of enlightened legislators must work to secure for higher education on the island the autonomy necessary to insulate it from political changes on the island.

If the campuses of the University of Puerto Rico were not buffeted by political change and if there were greater continuity and more predictable terms of office in administrative positions, we might see evidence of improved stability and continuity, a better campus morale, an end to the existence of political winners and losers on the campuses, and the beginnings of more cohesive campus communities.

The second issue, which we believe it is important to resolve, is the issue regarding the degree of autonomy of the Mayagüez campus (and of other campuses) within the University of Puerto Rico system.

One of the university trustees said, and we agree with this trustee, that the campuses cannot be independent. If they were there would be no university system. The campuses, however, must have a proper degree of autonomy. There must be a proper balance between the overseeing functions of the Central Administration, and the local decisions that must be made by those who are closest to and who must manage the campus on a day-to-day basis. The Central Administration must avoid micromanagement; the campus must accept the role of the Central Administration as a central one in matters of university wide policy and in issues affecting the general welfare of the University of Puerto Rico. In the case of the University Reform Law now under consideration, which proposes an increased degree of autonomy for the various campuses of the UPR system, we hope that it will gain approval and that it will fulfill the expectations of those who have sought its passage.

A third concern of the team, related to the second one, has to do with the relationship between the university at large and the Board of Trustees. Again a proper balance is needed between the powers of the Board, the president of the university, the chancellors, and the concept of local campus autonomy.

The chancellors are responsible to the president and the president to the board. A way must be found to preserve these roles, to honor them and avoid blurring these roles in practice. Neither board members, president nor chancellors should adjudicate to themselves rights and responsibilities properly belonging to one of the others. (Quoted from MSCHE report after the self-study and visit from March 26-29, 1995).

Analyzing these issues as three separate concerns is, in the opinion of some sectors of the faculty, an oversimplification of a problem that merits serious discussion. The campus community does not have any control over the political interference issue. Although this has

always been a problem in the past, politicians always have had respect for the campus, or the campus community was strong enough to contain such interventions. A period of higher political intervention began more than a decade ago and two events just before and after the Periodic Review Report (PRR) 2000, which was submitted in June 2001, led to crisis and turmoil on the Mayagüez Campus.

The first event was the appointment of a person to the chancellorship who had been ranked last among twenty candidates for the position. The consulting committee had conducted an intensive and open consultation process involving all sectors of the campus community and had published several reports on their activities during their search period. The appointment was obviously politically motivated, and it provoked a strong reaction from a usually passive academic community. The chancellor was forced to resign within a few weeks because of serious financial issues that were published in the island press.

The second event followed the appointment of the next chancellor. The Academic Senate refused to elect a consulting committee and so the UPR President made a direct consultation with the campus community in accordance with the General Regulations of the UPR. In the opinion of most of the campus community, the process was affected by political intervention, again. In less than a year, the perception of strong component of the academic community was that the new administration, beginning with the chancellor and including some deans and department heads, was intolerant, despotic, arbitrary, and illogical; in short, everything a university administration should not be. The academic community took direct and forceful action, and the Board of Trustees was forced to withdraw its confidence from the chancellor and remove the person from office.

The fact that a significant sector of the campus community embraces the autonomy banner is in no small part due to the frustration provoked by improper political intervention, which is even wider and deeper in most of the other campuses of the UPR system. On the other hand, most people advocating more autonomy are not interested in separating from the UPR system, and only a small group wants total separation from the UPR system. Most of the academic community wants more autonomy now because they understand how much the Mayagüez campus has lost in the last three decades.

Most of the problems related to the improper use of the chain of command are also due to improper political intervention. During the last three decades improper political intervention has manifested itself in the Board of Trustees, the President, the staff of the Central Administration, the disproportionately great influence of the smaller campuses on the University Board, and, to a lesser degree, in the administration of this campus. Mayagüez chancellors are often perceived as being participants in this process when they make their own administrative appointments.

This brief analysis of a rather complicated situation brings us to three conclusions that are based on the consensus of the academic community.

1. The academic community is frustrated with its inability to deal with this issue, as was shown by its lack of participation in recent consulting processes.

2. The two recent crises demonstrate the maturity of the Mayagüez campus. Both had the potential to be disastrous and both were short enough, due to the academic community's rise, not to cause too much damage.
3. Although the damage done during the two events described above was contained, the academic community has to be prepared to address this issue of political intervention at the appropriate time.

In its letter accepting the PRR 2000, the MSCHE requested a follow-up report by October 1, 2003 documenting (1) development and implementation of a comprehensive institutional strategic plan, and (2) development and implementation of a comprehensive outcomes assessment plan, including student learning outcomes.

The administration of the UPR has expressed its commitment to strategic planning for more than ten years, but it has not allocated the financial resources needed for the program. Each campus has embraced the strategic planning paradigm by assigning monies from its own limited financial resources. We have made slow progress toward establishing a real strategic planning culture. Several stages have been implemented in our colleges and departments and financial support given.

The situation is similar regarding the comprehensive outcomes assessment plan because UPRM pioneered the assessment paradigm in the UPR system. This process has gone parallel to the institutional research institutionalization. In the mid-nineties the UPR administration recognized the need for an institutional research structure, which based its decision-making processes on assessment. Unfortunately, the development of the assessment processes and the institutionalization of institutional research were postponed because of budget limitations, the changes in the campus administration, and the two crises just described.

During the late nineties, the College of Engineering established the framework it needed for ABET accreditation by developing assessment plans for each of its programs and by establishing the System for the Evaluation of Education (SEED) office. Although this college has the same budget problems that the other colleges have, it received both financial and educational donations from industry to implement the process. ABET's Engineering Criteria 2000, the new assessment criteria for accreditation, are conceptually similar to manufacturing quality standards like ISO 9000, for which industry has developed valuable expertise which it offered to the college for faculty and staff training. Another key factor for the success of the accreditation process was that the faculty attended the industry sponsored training programs and a strong sector embraced the assessment paradigm.

After the successful completion of the accreditation process, the College of Engineering's assessment paradigm and the SEED office concept were adopted for the campus. The institutional research structure was finally placed in the Planning Office and given a modest budget. The name of the office was changed to Office of Institutional Research and Planning, which sends the right message to the academic community. Although there is still a long way to go, the institutional research component of the office has already produced reports with unexpected results that will force the campus administration to make decisions in non-traditional directions. This decision making process has already proved to be connected to the strategic

planning process. In addition, the UPRM Academic Senate (Cert. 04-12, March 2004) requires all departments to include assessment plans for every new program and curricular change that takes place after August 2004. Existing programs must also be evaluated using the new plans. In summary, UPRM now complies with the MSCHE requirement, albeit in a modest way.

Findings

Task Force 3 expected a poor response to the sections of the questionnaires that applied to standards 4 and 5 because most of the people surveyed have little knowledge of these areas. Therefore, the task force conducted personal interviews with some key administrators and faculty. The participation of the student representative and a well-designed questionnaire helped assure an adequate student response. The task force also conducted several meetings to analyze the responses and the vast experience of the members played an important role in assuring the validity of the analysis.

The UPRM academic community traditionally shows a strong awareness of the campus administration, but apathy or distrust towards the UPR system administration, which is caused in great part by the political influence issue. The apathy and distrust toward the above-campus administration sometimes reflect as ignorance about the line of decision-making at that level. A large sector of the academic community thinks that the above-campus administration is ignorant about and unappreciative of very important characteristics of our campus, and that they continue to make decisions that influence us based on this lack of knowledge.

Task Force 3 expected to find a poor response to Standard 4 issues and a strong response to Standard 5 issues. The response to the questionnaires was poor, as expected, but some of the unexpected results deserve comment. The strategy of adopting the charge questions almost verbatim was not a good response motivator. The fact that Standard 4 applied to the UPR system administration was not properly explained in the questionnaires and the respondees confused the situation by referring to the campus administration. Most of the charge questions related to Standard 4 require documented evidence of the particular questions.

The UPR system is a structure defined by a 1966 law when there were two main campuses, Rio Piedras and Mayagüez, a School of Tropical Medicine, and two community colleges. The 1966 law established three principal campuses (Rio Piedras, Mayagüez, and Medical Sciences, two baccalaureate colleges (Cayey and Humacao) and four small community colleges. The law also established a University Board to function below the level of the Council of Higher Education (now the Board of Trustees). The three larger campuses had over 50 % representation on the University Board under that law; the four smaller colleges were represented by the Administration of Regional Colleges. Each campus is represented by its chancellor, an academic senator, and a student. Previously, UPRM and the two other larger campuses had stronger participation in the decision making process, but since 1994 when the four other campuses were given equal participation, UPRM has suffered serious consequences. The law also called for the immediate preparation of the University Regulations, which were finally approved in 1981. By the early nineties, the law was changed and the system is now composed of eleven units with equal representation on the University Board so that the representation from the three larger campuses dropped to below 20%. This is a strong indicator of how a complex system is

governed by an unreliable or obsolete structure. Today all governing bodies have a balanced student representation.

The opinions expressed in questionnaires, interviews, and the analysis of the task force can be grouped into three categories: (1) those related to bureaucratic aspects required by law, (2) those who answered the questionnaires as if Standard 4 referred to the campus administration as already discussed, and (3) those with strong critical opinions against the improper balance of power in the above campus administration, and the negative consequences to UPRM. Some sectors of the academic community represented by the first category expressed satisfaction with the evidence required by most charge questions related to Standard 4 based on the fact that all decisions of governing bodies are well documented on minutes, certifications and regulations (bureaucratic aspects) required by law. Most of the charge questions contain key words like "well defined system," "effective participation," and "effectiveness" which were used by those in the third category to responses indicating lack of evidence in the corresponding question.

Charge questions 9, 11 and 13 regarding periodic objectives assessment of the governing body and institutional leadership and governance, deserve specific attention. There is consensus among the participants in the analysis that there is no evidence of an effective procedure in place for the periodic objectives assessment of the governing body in meeting stated objectives, nor evidence of a periodic assessment of the institutional leadership and governance. There is evidence that meetings of faculty, senate, and the administrative board were conducted to update the members on mission and resources management issues, but the generalized opinion is that with the exception of the administrative board, those meetings are not enough.

Regarding Standard 5, the opinions expressed in questionnaires, interviews, and the analysis of the task force can also be grouped in three sectors: (1) similar to Standard 4, those characterized by satisfaction with the bureaucratic aspects of the charge questions, (2) those with moderate to strong satisfaction with the effectiveness of the administration, and (3) those with strong critical opinions against or dissatisfaction with the effectiveness of the administration. There is a strong disagreement on the adequacy of the administrator's selection processes and their skills.

All elected senators think highly of the accountability of the chancellor. This is an obvious indicator that all of them answered the questionnaire based on the present chancellor and not on whoever occupied the position in the time frame of the self-study. The role played by the elected senators leading the academic community's reaction in both crisis and turmoil events described before is good evidence for that statement. The task force members agree with both statements. Regarding the adequacy of the information, training, and decision making systems to support the administrative leader's jobs, both the elected senators and faculty are split between agreement and disagreement. This is an indicator that we have had modest progress regarding those issues with the assessment paradigm and the institutional research implementation, but that we have a long way to go.

All elected senators agreed that the administrative structure is adequate and that the lines of authority in the UPRM administration are clearly documented. The Task Force also agrees. Most of the elected senators disagree on the effectiveness of the periodic assessment of the administrative structures. The task force does not necessarily disagree with that statement

because the assessment procedures and the institutional research have initially been concentrated in student learning outcomes and demographics, but there is a feeling that the assessment and institutional research paradigm are informally transcending to the administration effectiveness assessment. UPRM faculty opinions do not disagree with those of the elected senators and the Task-Force 3 felt more comfortable with those and less comfortable with the different opinions expressed among the faculty. There are less important differences in opinions within faculty of the different colleges contained in the full report. Tables 4 and 5 present a summary of these findings.

Table 4: Elected Senators Survey Results

1. Indicate the extent to which you agree with the following statements about the CURRENT central administration at UPRM (i.e., Chancellor, Administrative Board (Junta), Academic Senate. Write or type an X in the box that corresponds with your answer.				
	Strongly Disagree	Disagree	Agree	Strongly Agree
(a) The Chancellor is held accountable to the primary responsibilities of the position.			7	6
(b) Adequate information systems are in place to support the work of administrative leaders.		5	7	1
(c) Adequate decision-making systems are in place to support the work of administrative leaders.		7	6	
(d) The organizational structure of the UPRM administration is clearly documented.		4	8	1
(e) The lines of authority in the UPRM administration are clearly documented.			11	1
(f) UPRM periodically assesses the effectiveness of administrative structures.	2	10		1

Recommendations

1. The imbalance on the University Board must be eliminated. The UPRM Academic Senate should negotiate with the Rio Piedras and Medical Sciences campuses to determine the best approach to deal with this goal, which probably will require amendments to the law.
2. The autonomy committee, which was created in the late 1980's and contributed to educate the campus community on the risks confronting our quest for excellence, has been dormant for more than ten years. It should be re-established under the leadership of the Academic Senate.
3. The campus administration should recognize the need to allocate sufficient budget to the institutional research structure, which should provide for similar sub-structures under each of the four colleges like the one developed in the College of Engineering for continuous assessment activities and training.
4. A similar approach should be used with the Strategic Planning paradigm to include sufficient budget and continuous training at all levels.
5. The campus administration should keep the institutional research operation together with planning but should place them under a newly defined administrative position above the deans and below the chancellor, like a provost. Perhaps the responsibilities of the Dean of Academic Affairs could be expanded.

Table 5: Faculty Survey Results

UPRM Administration	Results in percentages (%)				
	SA	A	D	SD	N/A
82. The process for selecting administrators seems fair.	11	51	59	61	10
83. The process for selecting administrators is open and transparent.	12	33	71	63	12
84. Administrators are selected based on their skills and education.	9	48	65	58	11
85. Administrators are selected for political reasons.	71	75	21	13	10
86. Administrators have appropriate skills to carry out their responsibilities and functions.	12	76	71	16	16
87. Administrators seem to have appropriate education and training to carry out their responsibilities and functions.	15	93	56	15	13
88. The Chancellor's vision for UPRM is well-publicized.	41	96	35	10	9
89. Administrators receive adequate clerical support.	28	99	29	8	27
90. Administrators receive adequate technological support.	24	97	36	11	23
91. Adequate information systems are in place to support the work of administrators.	17	90	40	20	25
92. Adequate Decision-making systems are in place to support the work of administrators.	10	61	62	18	39
93. The number of administrators is sufficient and meets the goals of the institution.	42	89	27	10	23
94. The number of administrators is sufficient for a land grant institution.	39	82	16	10	44
95. The number of administrators is sufficient for the size of the institution.	48	91	22	9	22
96. The number administrators is sufficient for the complexity of the institution.	48	92	21	11	21
97. The organizational structure of the UPRM administration is clearly documented	41	94	25	15	16
98. The lines of authority in the UPRM administration are clearly documented.	40	88	31	17	16
99. UPRM periodically assesses the effectiveness of its administrative structures.	10	36	52	52	35
Overall UPRM Administration	**518**	**1,391**	**739**	**417**	**372**

Standard 6: Integrity

Background
Integrity is an essential and defining characteristic of excellence of an institution of higher education. It concerns much more than whether an institution represents itself truthfully to its stakeholders. Integrity involves adherence to ethical standards, including fairness, due process, and respect for individual human beings, as well as internal and external consistency. In addition to intellectual honesty, issues to be taken into consideration include the right to free and informed consent; fair and impartial processes concerning areas such as hiring, evaluation, admissions, dismissal, and grievance procedures; mutual respect among its constituencies; and the respect for academic and intellectual freedom.

The task force charged to assess the issue of integrity has found no indication of any attempts by UPRM to deceive any of its stakeholders. As evidence shows (see Task Force 4 report), UPRM is basically an honest institution, it is "well intentioned," there is no "meanness" in its heart. However, evidence has been found of some dissatisfaction among its constituency about several of its procedures, such as hiring, evaluation, tenure, promotions, and how it handles academic dishonesty. There also seems to be a problem with the sufficiency of information, especially regarding job expectations and grievance procedures. Finally, the issue of political interference, commented on in previous reports to and from MSCHE, has not been alleviated. These are discussed fully in the task force report and summarized below.

In the 1995 Comprehensive Self Study Report and in the Periodic Review Report (PRR) 2000, the topic of integrity was not given a separate section. If integrity is interpreted as basic honesty regarding how an institution represents itself, there were no negative findings regarding integrity either in the above reports or in MSCHE's comments to these reports. On the other hand, when integrity is extended to include freedom from political interference (MSCHE's *Characteristics of Excellence in Higher Education*, p. 18), a comment in MSCHE's 1995 response to the accreditation visit must be mentioned. The response pointed out that UPRM had had six chancellors from 1984-1994, with cascading changes at other administrative levels. This was deemed to affect "*long range planning, administrative effectiveness and campus morale.*" It recommended that "*the entire public system of higher education together with the help of enlightened legislators must work to secure for higher education on the island the autonomy necessary to insulate it from political changes on the island.*" Unfortunately, it is not possible to report substantial progress in this area. From 1994- 2004, if interim chancellors are also counted, there have been an additional six chancellors at UPRM, with concomitant changes in lower level administrators. This, however, is neither predominately the fault of the administrators at UPRM nor as detrimental to the university as might be expected when considered out of context.

A little background into the political situation of Puerto Rico may help explain why this issue transcends the university. Puerto Rico, a Commonwealth of the United States, is politically split down the middle on the major issue of its relationship with the United States. The two major parties, representing respectively the alternatives of continued commonwealth status or statehood, are virtually tied, so that for the last thirty-six years the control of the government has seesawed back and forth between them. This has also engendered a heightened sense of faction,

even within parties. Even in a democracy this seesawing back and forth between political parties and the heightened sense of faction can be expected to have some effect on the governance of the public university. However, it is reasonable to hope that enlightened legislators--to utilize the term used by MSCHE--would recognize the benefit for the university and for the society which it serves of insulating the university from the rapid political shifts that tend to occur in Puerto Rican politics. A public university must be accountable to the public, but the public must also recognize that a university requires a considerable measure of autonomy.

Even though the above-mentioned enlightened change has not yet been successfully realized to the extent that it should, the task force believes that the basic functioning of the university has not been significantly hampered by political shifts. Long range planning has been affected, so that development and progress have been slowed down and the institution has not been able to develop its full potential as quickly as it could under different circumstances. But students receive a high caliber education, they are granted their degrees, curricula are modified and improved, grants are obtained, research is carried out, graduates are recruited by the best companies in the United States and in Puerto Rico, the institution develops and improves, and the social goods of an institution of higher education are accomplished. The fundamental reason for this, according to the opinion of the task force and of the UPRM-MSCHE Steering Team, is the dedication of the faculty and especially of those who carry out the fundamental work done in committees and in the academic senate, backed up, of course, by dedicated and knowledgeable staff. One member of the steering team has fittingly referred to this as the "permanent government." Top-level administrators may come and go, but the dedicated faculty and staff keep the institution on track.

Findings

The findings of the Integrity Task Force Report may be summarized as follows (details and evidence are found in the accompanying task force report):
1. The information provided to accreditation agencies, funding agencies, and the public in general is deemed accurate by most persons surveyed.
2. Procedures used to recruit and admit students are non-discriminatory and in accordance with ethical standards.
3. Students are properly informed about assessment procedures and about procedures related to academic honesty, but not about grievance or disciplinary procedures.
4. Procedures and practices used to assess and discipline students are fair, respectful, and in accordance with due process.
5. Students are properly informed about their programs of study but less satisfied with the information about the possibility for employment in their chosen field upon graduation.
6. A large percentage of faculty do not believe that they are sufficiently provided with specific information about what is expected of them in terms of teaching and research.
7. A large percentage of non-teaching employees do not believe that they are adequately informed about evaluation procedures, discipline procedures, dismissal procedures, and what is expected of them.
8. The faculty evaluation process needs improvement. As a result, the fairness of the process to tenure, promote, and discipline faculty is suspect.

9. The majority of non-teaching employees believe that the procedures and practices used to evaluate, promote, and discipline non-teaching personnel are neither fair nor in accordance with due process and respect for the individual.
10. Faculty and non-teaching employee recruitment procedures are deemed unfair or discriminatory by a significant percentage of faculty and non-teaching employees.
11. Specific institutional procedures to deal with cheating and plagiarism are incomplete. As a result, opinion tends to be divided as to their existence.
12. Professors do not feel adequately informed about procedures for student assessment, grievance procedures, and disciplinary procedures.
13. Many faculty are unclear about university policies concerning intellectual property rights, intellectual honesty, and research integrity.
14. There were fairly high negative responses, both by faculty and non-teaching employees, about whether a specific institutional policy exists to deal with conflicts of interest and whether they are informed of such a policy.
15. There is confusion and high negatives regarding the possible existence of a grievance procedure either for faculty or for non-teaching employees.
16. There does not seem to be a problem about persons being treated with disrespect except for a few cases that concern temporary or non-tenure track instructors.
17. There were higher than expected negative responses concerning the questions about whether the institution carried out its policies in a consistent, fair, respectful, and non-discriminatory manner.
18. The situation regarding undue political influence, especially as it affects the appointment and longevity of upper level administrators, has not improved during the last ten years.
19. Only about half of those questioned or surveyed responded that the institution has managed to create a community environment in which the members are encouraged to and supported in carrying out the institution's mission, goals and objectives.
20. There is no evidence that the institution has a policy for the periodic assessment of institutional integrity as manifested by institutional policies, processes, practices, and the way they are implemented.

The task force believes that in general the negative opinions regarding procedures and due process at UPRM stem from the informal and improvisational nature of many of these procedures, dating back to a time when the university was much smaller, much less complex, and many details were usually handled in a more familiar, informal manner. The task force sees evidence that UPRM is still undergoing a transition from a smaller, paternalistic institution to a larger more professional institution in which procedure and due process take precedence over more personal, familial relations.

Recommendations

The task force recommendations, listed in order of priority, are as follows:
1. For the reasons discussed above, the following procedures should be made more formal (*de facto* not just *de jure*), and consequently more accountable:
   - Dissemination of information regarding job expectations
   - Evaluation of teaching and non-teaching personnel

- Faculty and non-teaching employee recruitment
- Cheating and plagiarism policy

1.1 The higher administration of UPRM should make certain that both teaching and non-teaching personnel, and especially new personnel, are duly informed in detail of job expectations for which they are to be evaluated. This is primarily the task of first level supervisors, be they department chairs for teaching personnel or the immediate supervisors for non-teaching personnel. The task force believes that this is a question of adequate supervision. (Findings 6 and 7, charge questions 1e and 1f)

1.2 Evaluation procedures need to be improved.
    1.2.1 Evaluation instruments for faculty need to be updated and related proportionally to the different duties and job expectations. It is the understanding of the task force that alternate instruments were prepared several years ago but were shelved due to the lack of continuity in upper level administrators. These forms should be reviewed and, if found adequate, adopted immediately. If new forms are preferred, they should be developed without delay. (Finding 8 and 9, charge questions 2g and 2i)
    1.2.2 A certification from the Administrative Board (86-87-476) specifies that all teaching personnel without tenure must be evaluated yearly. Teaching personnel with tenure but below the rank of full professor must be evaluated every two years, and full professors every four years. The task force recommends that the upper level administration put in place measures to assure that these evaluations are being carried out as specified, especially those relating to new professors and professors without tenure. Moreover, teaching personnel below the rank of full professor, and personnel without tenure, should be informed yearly, either by the department director or by the department director together with the departmental personnel committee, of progress or lack of progress in meeting job expectations. (Finding 8, charge question 2g; finding 6, charge question 1e).

1.3 At present neither a process nor guidelines exist on how to handle possible occurrences of cheating or plagiarism when the penalty involved is less than suspension. Since most cases of cheating are handled informally, the task force recommends that guidelines be written to help professors and administrators handle incidents of cheating and plagiarism, including a process of appeal by students. Such guidelines would help protect professors and administrators, as well as students. (Finding 11, charge question 2e).
    1.3.1 There now exists, at the level of the Office of the Dean of Academic Affairs, an institutional committee on integrity that is studying the issue of student integrity. This is to be commended. The task force recommends that the committee, as soon as possible, produce guidelines for possible approval of the Academic Senate.

2. Given the disparity of opinions about procedures and policies among administrators, including deans, the task force recommends that deans, department directors, and even directors of non-academic offices be given workshops and training sessions on the General Regulations of the UPR, other important rules and certifications, supervision, performance evaluations, legal procedures, and ethics. It might be more efficient if the Office of the

President establishes a team or series of teams that would go from campus to campus giving such workshops.

3. Faculty, non-teaching staff, and students admitted to a lack of familiarity with many existing policies and procedures. It is not sufficient to publish them in some catalogue or even to post them on the web. The task force recommends that proactive steps be taken to disseminate relevant information about policies and procedures dealing with all aspects of university life.

4. The series of questions designed to solicit the opinion of constituents about whether the institution carries out its policies in a consistent, fair, respectful, and non-discriminatory manner (finding 17, charge questions 4a-d) generated some negative responses in the 25-45% range, with the highest negatives coming from the non-teaching employees. In order to function well, an institution needs to have the trust of its constituents, and this presupposes that they feel confident that the policies are carried out fairly and ethically. That approximately one third of the constituents do not feel that the policies are being carried out as they are written or in accord with ethical standards is of concern. Perhaps this has something to do with the dissatisfaction reported in the findings about procedures of evaluation and promotion (see findings 8 and 9 and also 6 and 7; charge questions 2g, 2i, 1e, and 1f). Also of concern is that 25-28% of the teaching personnel do not believe that policies are carried out in a manner that fosters a climate of academic and intellectual freedom. While 25 to 28% is not a majority, the importance of academic and intellectual freedom to the functioning of a university requires attending carefully to this issue.

5. In relationship to these issues, the task force recommends that the administration establish an independent group to ascertain the possible reasons for the negative responses in these questions and then proceed as soon as possible to design measures to improve the situation.

6. The chief manifestation of the undue political influence on the university during the last ten years has been the frequent changes in upper administrators, and the primary difficulty that this has caused has been to interrupt continuity and long range planning. The task force strongly endorses the recommendation made by MSCHE in 1995 that *the entire public system of higher education together with the help of enlightened legislators must work to secure for higher education on the island the autonomy necessary to insulate it from political changes on the island,* even while it acknowledges that much of its implementation is beyond the direct authority of the UPRM administration and even beyond the authority of the Office of the President or the Board of Trustees.

Commendations

1. *Continuous Improvement Education Initiative (CIEI)*
    The chancellor is to be commended for having established the Continuous Improvement Education Initiative, not just to deal with the current re-accreditation efforts and prepare for the upcoming visit from MSCHE, but also to continue as a permanent program, with its own office, budget, and staff, in order to foster continuous improvement after the accreditation visit has passed.

2. *The Committee on Integrity (for students) and the Committee on Research Integrity*
   The Dean of Academic Affairs has created two institutional committees which should help remedy some of the problems brought out in the findings regarding cheating and plagiarism, and the lack of an institutional wide effort for research integrity. It is hoped that they will show some results in the near future.

3. *The Center for Ethics in the Professions*
   The administration is to be commended for its support of the Center for Ethics in the Professions. This demonstrates the concern with the importance of ethics, whether it be for students, the institution, or society in general.

4. *Chancellor's General Presentation to the Combined Faculty*
   Although the General Regulations do not provide for a common meeting of all of the professors from the four colleges, the chancellor, following the initiative of some previous chancellors, once or twice a year schedules a meeting of all the professors in which he presents a "state of the university" speech, articulates his vision for the university, and allows faculty to ask question and express opinions.

Standard 7: Institutional Assessment

Background

The philosophy of accreditation for institutions and programs of higher education has changed significantly over the past ten years. Primarily, there has been a move toward outcomes based assessment where institutions and programs are required to provide concrete evidence of progress accompanied by a plan for short and long-term development and improvement. Specifically, there has been a significant change in the MSCHE standards for accreditation since the last UPRM self-study in 1995. In 1995, the standards spelled out two characteristics of an institution related to institutional effectiveness: "Policies and procedures…(that) lead to the effective assessment of institutional, program, and student learning outcomes; and ongoing institutional self-study and planning aimed at increasing the institution's effectiveness." The 2002 MSCHE standard "Institutional Assessment" encompasses six standards related to institutional effectiveness and is much more specific in describing the nature of institutional effectiveness.

MSCHE Response to 1995 Self-Study

The 1995 self-study included its findings on institutional effectiveness in the introduction to the report. The MSCHE Evaluation Team did not respond directly to these findings. However, within their response to the section on Mission and Goals, the team highlighted the following strengths: campus-wide awareness of outcomes assessment, establishment of an office of Planning and Development, a unit on Institutional Research, and a Total Quality Management Program. The major limitations stated by the team were:

We also believe that more efforts are needed in the area of Strategic Planning in order to more fully realize these mission objectives and that the outcomes assessment initiatives currently under way need to be eventually fully institutionalized in order to measure if mission objectives have been met … even though members of the campus community have been exposed to and many understand outcomes assessment, the application of outcomes assessment criteria is still not widespread. (MSCHE Evaluation Team, 1995, p.8)

Thus the major comment of the MSCHE Evaluation Team in 1995 related to the institutionalization of outcomes assessment initiatives was to ensure their application across campus. The major events between 1995 and 2001 related to this comment are as follows:

- 1996-1999: Office of Quality Improvement and Innovation (known as TQM) was opened under Chancellors Stuart Ramos and Fred Soltero.
- 1999: TQM Office Director Dr. Merbil González submitted a report including a list of 14 recommendations to Acting Chancellor Dr. Fred Soltero and UPR President Norman Maldonado. A full list of the recommendations is provided in the Task Force 5 self-study report.

- 1998-1999: Consultant Dr. Jeffrey Seybert was hired at the system-level to determine key areas of institutional research for UPR Central Administration and all campuses. On the basis of his recommendations, the following actions are taken:
    - ✓ Physical location for institutional research office is identified
    - ✓ Institutional Research and Management Information Systems Steering Committees are formed
    - ✓ Title V grant for external funds to operate institutional research office is submitted
- 1999: Title V funds are granted under Chancellor Zulma Toro; however, the office never receives the funds.
- March 2001: Office of Institutional Research and Planning (OIIP) is opened under Interim Chancellor Pablo Rodríguez.

Thus, in the years between the 1995 visit and the Periodic Review Report (PRR) of 2000, UPRM made slow but steady progress toward institutionalizing assessment processes. Despite instabilities in institutional leadership, a permanent institutional research office was established, representing a significant step towards the institutionalization of assessment at UPRM.

MSCHE Response to PRR 2000

In November 2001, MSCHE Chair Mr. William B. DeLauder accepted the PRR 2000, but requested a follow-up report (by October 1, 2003) to document the development and implementation of comprehensive strategic and outcomes assessment plans. This request foreshadows the emphasis on institutional planning and assessment that would characterize the 2002 MSCHE standards of accreditation. UPRM administration took the following actions to respond to the requests in Mr. DeLauder's letter:

- February 2002: 25 faculty and 5 staff participate in an assessment institute offered by Penn State's NCTLA in San Juan.
- March-April 2002: Several workshops on outcomes assessment are offered in College of Arts and Sciences, and in departments of Nursing and Mathematics
- April 2002: Chancellor Pablo Rodríguez approves and implements the Office of Institutional Research and Planning.
- May 2002: Two-day assessment workshop for UPRM faculty and staff with Penn State's NCTLA speakers is offered.
- June 2002: MSCHE Faculty Coordinator Prof. Marta Colón participates in AAHE Conference in Boston.
- January 2003: Chancellor Jorge I. Vélez Arocho opens the Continuous Improvement Educational Initiative (CIEI) and appoints Dr. Anand Sharma as its leader. Dr. Sharma is chosen specifically because of his success as the leader of the 2002 ABET Engineering accreditation process.
- January 2003-July 2003: Assessment plans for institutional effectiveness and student learning assessment are developed by Dr. Banerjee and Prof. González, task force leaders for Standards 7 and 14 respectively. Dr. Sandra Dika, Assistant Researcher with the System for the Evaluation of Education (SEED) office in Engineering, assists Dr. Banerjee with the institutional effectiveness assessment plan.

- August 2003: Both assessment plans are approved by the UPRM Administrative Board and the Academic Senate (in the case of the plan for the assessment of student learning) and are immediately implemented campus-wide.

On November 26, 2003, MSCHE Chair Ms. Judith L. Gay accepted the follow-up report, replying in a nearly identical manner as to the PRR 2000. The letter specified that in its 2005 Self-Study, UPRM should document "(1) further development and implementation of a comprehensive long-range strategic plan which links long-range planning to decision-making and budgeting processes, and includes timelines, priorities, assignments of responsibilities, and financial implications, and (2) implementation of a written plan for the assessment of institutional effectiveness and student learning and evidence that student learning information is used to improve teaching and learning" (Gay, 2003, p. 1).

The UPRM administration responded directly to the request with the following actions:

- November 18, 2003: General Motors (GM) sponsored workshop to launch the institutional assessment plans is offered to deans and department directors.
- November 2003 – present: Informal assistance by MSCHE Steering Team members is offered to departments for the development of student learning assessment plans.
- January 2004: The UPRM Strategic Plan, organized around 8 key areas, is approved by the UPRM Administrative Board and the Academic Senate.
- March 16, 2004: Resolution passed in UPRM Academic Senate requiring departments to have a student learning assessment plan in place for their curricular and program change requests to be considered by the Senate.
- May 7, 2004: A second GM sponsored workshop on continuous improvement through strategic planning and assessment is offered, this time to administrative officers on campus.
- August 2004: UPRM registers in the Building the Engagement and Attainment of Minority Students (BEAMS) program of the American Association for Higher Education. This program includes financial support to implement a field-tested, Spanish language, national instrument on student learning and engagement (the National Survey of Student Engagement or NSSE) and to develop an institutional improvement plan.

At the college level, several efforts were undertaken to assist departments with the development and implementation of student learning assessment plans. Links to strategic planning and assessment information on each college are provided. The approved assessment plans can also be accessed at http://www.uprm.edu/msa.

- *Agricultural Sciences*: http://www.uprm.edu/agricultura/planificacion/
  Committees are created to develop student learning assessment plans in each academic department.
- *Arts and Sciences*: http://www.uprm.edu/ac/avaluo.html
  Associate Dean for Assessment and Information Systems is established by the Dean of Arts and Sciences in July 2003. Two faculty members from each department participate in a semester-long professional development series on student learning assessment in the second semester of 2003-2004. Their efforts culminate in a presentation and seminar, as well as a

compilation of assessment plans and activities for the use of Arts and Sciences faculty (May 2004).

- *Business Administration*: http://enterprise.uprm.edu/avaluo/default.html
  The dean names an Assessment Coordinator in 2003. Under her direction, three workshops on assessment of student learning were held during the 2003-2004 academic year (May 2003; October 2003; March 2004). The "Equipo de Avalúo de Resultados" develops a student learning assessment plan for the college.

- *Engineering*: http://ing.uprm.edu/SEED.php
  The SEED office employs an Assistant Researcher for 2003-2004 to assist departments with the revision of course evaluation forms, student surveys, alumni surveys, employer surveys, and other assessment instruments developed for ABET accreditation. The office leads the development of the strategic assessment plan for the College of Engineering and plays a key role in organizing the campus-wide assessment workshops on November 18, 2003 and May 7, 2004.

Thus, most UPRM units are in the early implementation stage of their strategic and student learning assessment plans. This is understandable, given the relatively recent focus of both the MSCHE and UPRM on planning and assessment. However, special mention must be made of the efforts in Engineering and Arts and Sciences to institutionalize assessment of student learning and other educational outcomes.

Findings

Methodology

The inquiry questions for the Task Force 5 self-study are grouped into seven focus areas: (1) periodicity of assessment, (2) use of assessment results for continuous improvement, (3) analysis of current assessment infrastructure, (4) foundation in mission and goals, (5) support and collaboration of faculty and administration, (6) realistic goals and timetable, and (7) multiple measures. The inquiry questions guiding the study of each focus area are shown in Table 6.

Table 6. Inquiry Questions for Task Force 5 Self-Study

Assessment Process and Use of Results
1. Periodicity of Assessment Has there been an increased emphasis on assessment at UPRM in the last 5 years (1999-2003)? Is there an identifiable institution-wide assessment effort?
2. Use of assessment results for Continuous Improvement: Does the institution incorporate the results of its assessments in its strategic planning process? If so, how?
3. Analysis of how the assessment infrastructure supports the evaluation process: What are present limitations and how can they be overcome?
General Characteristics of Institutional Assessment Plan and Process
4. Mission, goals and objectives of UPRM: Are student learning and other outcomes assessed in terms of the mission, goals, and objectives of the institution?
5. Support and collaboration of faculty and administration: What are the roles of faculty members and administrative personnel in institutional-level assessment planning and implementation?
6. Realistic goals and a timetable: Are the institutional assessment plan's goals and timetable realistic?
Characteristics of Assessment Measures and Approaches
7. Use of multiple quantitative and/or qualitative measures: What kinds of measuring techniques and tools are implemented? Both qualitative and quantitative?

In this study, both qualitative and quantitative research methods were employed to address the self-study inquiry questions. The use of both methods together provides a more complete picture of the current state of institutional assessment at UPRM. A summary of the data collection methods is shown in Table 7.

Table 7. Data Collection Methods for Task Force 5 Self-Study

Method	Details
Existing Documents	Strategic planning and assessment documents; n=7
Interviews	Institutional-level offices; n=10
Surveys	Faculty members (docente); n=206 Staff members (no-docente); n=630 Students – Institutional Experiences; n=1059
Questionnaires	24 institutional units; n=68[8]

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[8] A total of 68 questionnaires including questions related to Standard 7 were received. This number does not reflect the number of responses to each inquiry question. See the full task force report for details.

Hypotheses
The following general hypotheses guided the data analyses for the questionnaires and surveys:

1. Faculty, staff, and students from units with a greater emphasis on assessment may have a more positive view of assessment efforts on campus than respondents from units that have had lesser emphasis.

2. Faculty and students in leadership roles (committees, senate, organizations) may have a more positive view of assessment efforts due to their greater exposure to institutional-level decision-making based on assessment.

3. Staff members who have been at the institution a shorter period of time (0-5 years) may have a more positive view of assessment efforts because their time at the institution coincides with the more recent and successful efforts to institutionalize assessment.

For the surveys, these hypotheses are tested with chi-square tests of independence. When a test is statistically significant, this means that responses are dependent on group. For the purposes of the analyses in this self-study report, a significance level of .05 or lower was considered statistically significant.

Synthesis of Findings
In terms of assessment culture, UPRM is in the process of moving from a "compliance" mode to a "continuous improvement" mode.

1. There has been an increased emphasis on assessment at UPRM in the last five years, signaled by the establishment of assessment-related offices at the institutional and unit levels, as well as the development and beginning implementation of institutional strategic and assessment plans. Although assessment activities have generally been sporadic and motivated by required reporting, there is an identifiable institution-wide assessment effort.
   - The OIIP, in cooperation with the other members of the Institutional Research Committee (Computer Center, Admissions, Graduate Studies, and Registrar) compiles institutional indicators annually and provides customized reports to those who request data.
   - The TQM office (1996-1999) conducted a study of student satisfaction with campus services and provided the information to the pertinent services to promote continuous improvement.
   - Currently, faculty (61.6%), staff (63.4%), and students (61.5%, 66.4%) who responded to the survey agree that there is an environment of assessment and/or continuous improvement at UPRM.
      1. Faculty, staff, and students from units with greater emphasis on assessment (e.g., Engineering, Biology, Chemistry, Nursing) do not differ significantly in their opinions on the assessment environment at UPRM.
      2. Students in leadership roles do not differ significantly from other students in their opinions on assessment environment at UPRM. However, faculty members who have been on a personnel committee are less likely to agree that there is an institutional assessment program than those who have not ($\chi^2_{198} = 5.84$, p=0.05).

3. Based on number of years employed at UPRM, there were no differences in staff members' opinions on assessment environment at UPRM.
- Selected instruments used for the 2005 UPRM-MSCHE self-study (i.e., questionnaires, surveys) will be re-administered in the Second Semester of 2004-2005, as part of the activities of the CIEI.
- All colleges and deans' offices have approved strategic plans in place, which include an assessment plan within the strategic plan, or have a separate assessment plan set out.
- Institutional data, while used mainly for reporting and routine work, is also used to determine trends, such as admissions, enrollment and grade distributions, to facilitate decision-making and identify areas for improvement.

Areas for improvement:
- Institutional-level offices (e.g., Budget, Finance, Human Resources) are developing assessment plans, but perceived a lack of flexibility or independence to develop goals and objectives. Respondents expressed the belief that a lack of resources (human and financial) is the main obstacle preventing them from developing a formal assessment program.

2. The strategic planning and resource allocation process cannot currently be described as data-driven, but has the potential to become so with the new strategic planning model and with the central availability of institutional data.
- The new strategic planning model (2004) includes the specification of metrics, responsible parties, and timeline for each strategic goal. The annual reporting process will be based on strategic plans; thus, the first assessment cycle should be completed in May 2005.
- The TQM office (1996-1999) generated data and reports that were used to improve institutional processes, e.g., processing time of paperwork related to personnel.
- Institutional data is being centralized in a data warehouse managed jointly by the Computer Center and the OIIP. Campus offices can request data from this database.

Areas for improvement:
- Overall, there is a lack of documentation on resource utilization and continuous improvement at both the institution and unit levels. Respondents are unsure about how resources are allocated at the institution level, and perceive that such allocation is mainly controlled at the system (UPR) level. The resource allocation process must be made more transparent to personnel at all levels.

3. The current assessment methodology must be expanded to adequately assess overall effectiveness at UPRM. Assessment-related activities have generally been descriptive rather than analytical and have relied largely on quantitative methods. The major limitations in terms of assessment infrastructure are the lack of a formalized process (caused in part by instability in institutional administration) and lack of adequate financial and human resources.

Areas for improvement:
- 87.5% of questionnaire respondents and 84.7% of surveyed faculty indicated that UPRM's assessment process could be improved.
- Contrary to expectations, individuals with more experience and involvement in assessment and institutional committees are less positive about assessment efforts on campus than those with less experience and involvement.
- The chancellor's office indicated that "…(t)he most important present limitation…is the institutionalization of the process: to plan, to assign resources, to implement according to plan and to assess." Further, the chancellor expressed a clear, three-step process for improving assessment as well as a commitment to doing so. The chancellor's office must act to formalize the process through adoption of policies.

4. While the goals and timeline of the Plan for the Assessment of Overall Institutional Effectiveness are realistic and achievable, the roles of faculty members and administrative personnel in the planning and implementation process must be clarified, and documentation of alignment of services and outcomes assessment with institutional mission and goals must be improved.
   - The new institutional strategic plan is aligned to the mission, making it more likely that unit level plans will also serve the mission and goals.
   - The goals and timeline of the institutional assessment plans were deliberately outlined to be achievable given the current resources allocated to assessment at the institutional and unit levels.

   Areas for improvement:
   - A collaborative process for assessment planning and implementation is not specified in the institutional assessment plan. Responsibility is attributed to the OIIP, but the roles of other administrative personnel and faculty members are not discussed. The effort will clearly have to go beyond OIIP and CIEI, so this issue must be addressed.
   - The institutional assessment plan provides a matrix showing the alignment of the UPRM mission and strategic goals with MSCHE essential areas, but the alignment of the institutional learning outcomes with the institutional mission must be formally documented and publicized to the UPRM community.

Recommendations

The following recommendations are made based on the information collected to July 22, 2004. In the spirit of an on-going long-term assessment process (4 – 6 years), these recommendations may be appended for completeness by April 2005.

Urgent, Immediate Recommendations (by June 2005)

1. While the institution has met the requirements of MSCHE to develop institutional strategic and assessment plans, the adequate implementation of these plans is still pending. To ensure that plans are implemented and sustained, it will be important to have a clear understanding of the technical assistance needs of UPRM units to conduct assessment and analyze assessment results. Task Force 5 recommends that the UPRM-MSCHE Steering Team, as

part of the MSCHE self-study process for Standards 7 and 14, conduct a needs assessment to determine the needs of academic and administrative offices related to the implementation of assessment plans.

2. A major step forward for the institution in the past three years has been the establishment of two institutional-level offices to deal with institutional assessment. While the mission of the Continuous Improvement Educational Initiative (CIEI) is focused on the assessment of student learning outcomes, the explicit relationship between the two offices has not been formalized within the institutional structure, nor is it clear to the institutional community. Task Force 5 recommends that the chancellor, upon the advice of the UPRM-MSCHE Steering Team through this Self-Study Report, formalize the relationship between the Office of Institutional Research and Planning (OIIP) and the CIEI by delineating the general responsibilities of each office in terms of institutional assessment.

Short-Term Recommendations (2-3 years, prior to next PRR)

3. The CIEI is envisioned to be a three-year initiative at UPRM, according to the chancellor's statement on the establishment of this office (see http://www.uprm.edu/msa - chancellor's message). The results of the Task Force 5 and other self-studies indicate that more resources are necessary to implement institutional assessment at UPRM. Task Force 5 recommends that CIEI be adopted as a permanent part of the institutional structure, as delineated by the UPRM-MSCHE Steering Team and the chancellor (pursuant to Recommendation 2).

    3a. The office should be staffed by a full-time coordinator. This person should have at least a master's level degree in education or human sciences, and should have experience and training in evaluation and assessment.
    3b. Additional office personnel should include two full-time student learning assessment specialists, who would each be assigned a "caseload" of units on campus to provide technical assistance on assessment development and implementation.
    3c. A permanent Institutional Committee on the Assessment of Student Learning should be formed, to be led by the CIEI Coordinator and constituted of the appropriate assessment committee representative or officer from each college.

4. As units complete their strategic plans based on the eight new strategic areas, 2005-2006 will be the first year of their implementation. The institutional strategic plan does not provide guidance on the unit-level reporting procedure, e.g., when and to whom. Task Force 5 recommends that the chancellor's office formalize the reporting procedure for strategic planning and assessment, and suggests that the institutional and unit level Annual Report format be revised to oblige units to report their progress in the eight strategic areas.

5. The task force self-studies noted an overall lack of documentation for decision-making and planning procedures. In particular, this self-study revealed a lack of awareness on how to document and assess institutional procedures. Task Force 5 recommends that an institutional ad-hoc committee or task force be appointed to study documentation procedures at peer institutions, and to develop a set of best practices to be adopted and used at UPRM. The

implementation of best practices should involve appropriate training of personnel and wide dissemination to all campus constituents.

6. Lack of resources was a recurring and legitimate theme in the self-study to explain slow progress on assessment efforts. However, it is possible that existing resources may not be used to their current potential. Task Force 5 recommends that a formal assessment expertise database be developed by the OIIP and the CIEI to identify offices and personnel on campus that can be consulted to provide training and technical assistance during the implementation process (e.g., Center for Applied Social Research – CISA, abbreviation in Spanish).

7. Continuous improvement of an organization is not possible without the continuous improvement of its people. Results from the Task Force 5 self-study reveal that faculty and staff who responded to the survey are unclear about how they are evaluated, and further, believe that current evaluation practices are neither fair nor in accordance with due process. Task Force 5 recommends that the institution, through the OIIP, conduct an inventory of personnel evaluation procedures to determine the current role of such evaluation in continuous improvement and to make recommendations for improvement.

Standard 8: Student Admissions
Standard 9: Student Support Services

Background
UPRM is continuously working to develop initiatives to have students become the central figures or the "reason for being." For that reason, UPRM is working to maintain the total student body enrolled at its current level and to improve the services that we provide to our students.

During the MSCHE accreditation visit in 1995 the Evaluation Team made some recommendations related to the area of students and student life. Among the recommendations are the following
a) *"Strong efforts should be made to support initiatives to improve student retention rates and accelerate their progression throughout their programs"*
b) *"In order to be more effective, some responsibilities of the counselors which now include dealing with admissions and career counseling, may have to be assigned to others"*
c) *The Counseling Department is at present required to spend too much time conducting activities for the recruitment of high school students and their counselors off campus"*
d) *"We would like to observe that students use the facilities provided; athletic programs and student center, among others, and an improved and strong leadership presence on campus"*
e) *"Health Services were offered on a limited services hours schedule and students expressed a low level satisfaction with medical consultations, waiting periods and health plan referrals"*

In response to these recommendations UPRM has made several modifications. For example, some departments of the office of the Dean of Students (Guidance and Counseling Office, the Health Services Department, the Office of the Quality of Life) are increasing the number of workshops and seminars offered to students in order to improve retention rates. Also, the office of the Dean of Academic Affairs implemented the course UNIV (Skills for College Success), which is taught by the UPRM Counselors and is required for all incoming students. In 1997 a Recruitment Division was established at the Admissions office to relieve counselors and advisors from recruitment activities with high school students. UPRM has continued to expand its services and hours of operations to meet the demands of a growing and diversified student body. Finally, the Health Services Office was reorganized, following an evaluation by the Total Quality Management Office.

Findings
1. Admission Standards
   a) Undergraduate
Admissions standards for undergraduate students were established for the entire UPR System through Certification Number 25, 2003-2004 of the Board of Trustees.

Candidates for admission to the first-year class at UPRM must file an application for admission with the Admissions Office. Applicants must have a high school diploma or its equivalent from an educational institution duly accredited by the Department of Education of Puerto Rico.

Prospective applicants for admission to the freshman class must take the University Evaluation and Admissions Tests (PEAU in Spanish) administered by the College Board. This includes aptitude and achievement tests. Prospective students can take the English version of the test (SAT and Achievement Test on English Reading, Writing, Mathematics Level I and Level II, and Spanish Reading).

First-year applicants are only considered for admission in August of the first semester. Applications should be submitted before November 30 of the year prior to admission. Also, prospective students have to provide the following official documents: a) high school academic transcript; b) official report of test scores obtained on CEEB or SAT; c) a certified check or money order for the application fee.

Admission to UPRM is based on an admission index formula. The General Application Index (IGS, abbreviation in Spanish) is calculated as follows: 50% is based on high school academic index, 25% on the mathematical score, and 25% on the verbal score on the Aptitude Test of the College Board examination. These raw scores are then converted to obtain the General Application Index. Admission is granted to students whose index strictly complies with the minimum value established by the Administrative Board of the respective campus to which the students apply. Admission index may vary from year to year according to program demand and admission limitations.

b) Graduate

Those interested in admission to graduate studies at UPRM must file an application with the Office of Graduate Studies. Three letters of recommendation, three official transcripts for every institution of higher education attended, and an application fee complete the application. All applications should be completed before February 15 for admission in the first semester, and before September 15 for the second semester. However, some departments (e.g. Department of English) have on-going admissions. The favorable recommendation of the corresponding departmental director or program director is also required.

General requirements for admission to graduate studies are:
a) Holding a bachelor's degree from the UPR or its equivalent from an accredited institution
b) Having a working knowledge of Spanish and English as determined by the program to which the solicitant is applying
c) Satisfying one of the following index requirements (graduation grade point average of 2.50 or better; or grade point average of 3.00 or better in the major field; or have completed a minimum of 60 credit hours during the last five semesters of the bachelor's program with a grade point average of 3.00 or better)
d) Satisfying all department requirements, which may include, but are not limited to, holding a bachelor's degree in the area of specialization in which the applicant

intends to pursue graduate studies, having a grade point average higher than that required above, and having completed courses in specific subjects. Graduate committees from the different programs may also require to interview the applicant.

Applicants who do not meet the aforementioned academic index requirements, but who have practised their profession for a minimum of three years, may be considered for regular admission if they first obtain admission as non-degree students and complete, with a grade point average of at least 3.00, a minimum of nine credits in advanced undergraduate and / or graduate courses during the first three semesters following the mentioned admission.

   c) Compliance with the university's mission statement
The current admissions standards for undergraduate and graduate students at UPRM comply with the university's mission statement. The mission of the university is stated in its publications, which include the catalogs (University of Puerto Rico at Mayagüez – *Undergraduate Catalog* 2003 - 2004, p.2; University of Puerto Rico at Mayagüez – *Graduate Catalog* 2003-2004, p.2).

2. Admission Information Standards
   a) Awareness of admissions policies and standards
UPRM informs prospective undergraduate and graduate students about its admission policies and standards to make informed decisions by publishing the catalogs annually. This information is also included on the university's Web site.

   b) Information about academic program offerings
Prospective undergraduate students receive a manual with information of the academic programs at UPRM. As mentioned earlier, UPRM has a Web site that includes the catalogs which have information about the academic programs.

   c) Testing
As explained in the section about admission standards for undergraduate students, UPRM requires that prospective students take the university evaluation Tests (PEAU in Spanish) administered by the College Board or the English version of the test (SAT, Achievement Tests on English, Mathematics and Spanish Reading). These tests are used to determine the general application index of the student and also for placement in Mathematics, Spanish and English courses. In addition, at the graduate level the departments of Chemistry, and the programs in Computing and Information Sciences, Engineering, and Business Administration require admission exams such as GRE or TOEFL.

Learning outcomes
UPRM distributes information through its catalogs and Web sites to enable prospective students to learn about student learning outcomes and through open houses, summer camps, and visits to high schools. Administrators at UPRM believe that the information provided is effective because many students participate in these activities and the number of applications for admission that the university receives each year remains high.

Information about financial aid (scholarships, grants, loans) for prospective students is detailed in the undergraduate and graduate catalogs.

3. Transfer information
UPRM policy about transferring credits is clearly defined in the catalogs. UPRM reserves the right to accept, as transfer credits, those courses taken at other institutions of higher education. Only those courses with a grade of C or better will be evaluated for credit transfer. The maximum number of transferable credits is half of the total required for the degree. The Registrar's Office informs transfer students when the equivalencies are received from the academic departments. This mostly occurs after the students are accepted and registered. Students must apply for authorization to take courses for credit in other universities. During this process the academic departments that offer the desired courses inform the students of the courses they are authorized to take. The Registrar's Office informs them about the academic regulations with respect to the grades that would be acceptable.

4. Assessment of student success
Academic departments provide on going assessment of student success. The Office of Institutional Research and Planning (OIIP) provides statistics about retention of undergraduate and graduate students. UPRM has established rigorous admissions criteria to seek students who demonstrate potential for high-level performance.

5. Review of the information
UPRM annually reviews the information it publishes regarding admission standards and the procedures and policies which guide the admissions program.

A Webmaster reviews the information on the university's Web site on a regular basis.

6. Evidence of the accuracy and effectiveness of financial aid information, scholarship material, and academic advising materials.
Annually, two evaluations of the accuracy and effectiveness of financial aid information are conducted. One evaluation is conducted by the Central Administration and the other by an external auditor.

7. Evidence of the utilization of information to the review of financial aid practices.
UPRM has no evidence about the utilization of information appropriate to the review of financial aid practices to reflect whether they adequately support admission and retention efforts.

8. Information appropriate to the review of the student retention, persistence and attrition that reflects whether these are consistent with student and institutional expectations.
Academic departments take action through academic deans who participate in the establishment of institutional policy related to student retention, persistence, and attrition.

9. Programs that constitute support services at UPRM

The areas comprising programs and support services for students at UPRM include the library, counseling, registration, financial aid, health services, computer center, student exchange programs and international student services, housing, placement, quality of life, social and cultural activities, athletic activities, campus safety and security, band and orchestra, alumni, bookstore and cafeteria.

The aforementioned programs and support services were evaluated through questionnaires submitted to academic deans, departmental chairs, academic counselors and student services offices. Also, UPRM students were surveyed.

Eight-hundred ninety-two (892) students responded to the survey. The academic colleges were represented as follows: Agricultural Sciences (16%), Arts and Sciences (11%), Business Administration (17%), Engineering (52%), and other non-classified students (4%). Fifty-three percent (53%) of the responses were contributed by males and 47% by females. Approximately 2% of the students surveyed were graduates while 69% were regular or full-time students. Among the students, 10% had performed as president of a student organization and 1% had been elected as student senators.

Students' opinions about the programs and support services:

a. Library

Over 63% of the surveyed students frequently visit the library seeking services. If we combine this percent with those students using the services occasionally, the value increases to 90%. In general, the survey suggests a high percent of satisfaction (82%) among students. The electronic services offered by the library were also surveyed. For this service, 77% of the students had had access to the library electronically, and over 55% of these students used it frequently or occasionally. The level of satisfaction of those who regularly use the service was 46% while the level of dissatisfaction with the service was 7%.

b. Counseling and guidance

Over 42% of the students showed satisfaction with the services while 43% were not aware of such services.

c. Registrar's Office

Sixteen percent (16%) of the students questioned visited the facilities of the registrar frequently. In this group of students, we detected a 76% satisfaction. However, this level decreased to 70% in those students that use the service occasionally. The same pattern of reduction of satisfaction was observed among students who rarely asked for service.

d. Financial Aid

Sixty-four percent (64%) of students surveyed indicated that they were frequent or occasional users of this service. The percent of satisfaction in this group was 70%. This level of satisfaction decreased to 48% in those students that used or visited this service only on rare

occasions. The survey showed 55% of general satisfaction and 23% of dissatisfaction. Twenty percent (20%) were not aware of or had not visited the financial aid office.

e. Health Services
Forty-eight percent (48%) of students used the health services frequently or occasionally. Twenty-one percent (21%) had never used this service while 30% utilized it only on rare occasions. A 78% satisfaction was detected among frequent or occasional users while only 15% of this group had shown dissatisfaction. Overall, 60.5% were satisfied with the service versus 13% of students who indicated that they were dissatisfied. Approximately 26% did not make comments regarding satisfaction.

f. Campus Computer Center
A majority of students surveyed (59%) indicated that they were not users or only rarely used the Campus Computer facility. From those who rarely used the facility, 50% were dissatisfied. However, a 46% of general satisfaction was detected. On the other hand, 60% of the surveyed students were frequent users of departmental or college computer centers. In this case, a 78% satisfaction was detected while 20% indicated dissatisfaction.

g. Student life services
The student survey showed low demand for the following services: Quality of Life (QL), Vocational Rehabilitation (VR), Student Ombudsperson (SO), Student Exchange Programs and International Student Services (EP), Housing (H), Social and Cultural Activities (SC) and Placement (P). A high percent of students surveyed (QL=87%, VR=85%, SO=81%, EP=77%, H=77%, SC=73% and P=62%) indicated that they had never used or visited these services. These percents increase to 95% in QL, 92% in VR, 92% in SO, 91% in EP, 90% in H, 88% in SC and 81% in P if we add those students who used services on rare occasions. The level of general satisfaction resulted in 9% in QL, 11% in VR, 12% in SO, 15% in EP, 16% in H, 20% in SC and 24% in P. If we take into consideration only those expressions from frequent use students, the percent of satisfaction was as follows: P=83%, SC=83%, and SO=72%. Others (EP, QL, and H) showed values between 50 to 60%.

Regarding the recreational and sports facilities, 53% of students used them frequently or occasionally. In this group of students 79% satisfaction was recorded. Twenty-four percent (24%) indicated that they used the facilities only on rare occasions with 43% satisfaction in this group.

h. Other services
    1. Campus safety and security
Students do not visualize this office as a student service. Eighty-five (85%) of students surveyed indicated that they visited the office rarely. The average percent of satisfaction among students was 50%.

Over 51% of the students claimed to be users of the trolley. Sixty (60%) percent were satisfied with the service while 35% were not satisfied. Only 27% indicated that they did not use the trolley for transportation.

2. Cafeteria

Over 56% of the students surveyed are frequent users of the cafeteria. Of this group, 72% were satisfied and 24% were dissatisfied. Of those students who occasionally visited the cafeteria (25.5%), the percent of dissatisfied increased to 35.6% while the satisfied decreased to 61%.

3. Bookstore

In the student survey, 45% of the students utilized this service frequently. The level of satisfaction was 85% versus 11% of dissatisfaction. Forty-one percent (41%) are occasional users with 72% satisfaction.

10. *Assessment of the support services available at the UPRM*

Fifty-six percent (56%) of offices surveyed did present a fully developed and implemented assessment plan. Forty-four percent (44%) of offices showed a lack of knowledge concerning the effectiveness of the services provided in accomplishing their role. Furthermore, those offices presenting some assessment activities of their services do not use the gathered data to improve. However, some offices reported that changes are in effect to improve service based on positive comments and non-formal assessment.

11. *Administration and procedures of the support services programs*

Student support services at UPRM are appropriate and satisfy most students surveyed. There is evidence that most of the offices providing the services had been performing well, aligning their services to the mission and goals of the Institution.

The goal of having students become the central figures is addressed by those offices subscribed to the Dean of Students while the goals of internationalizing the institution and of encouraging an entrepreneurial spirit among students are addressed by academic offices and counselors.

Several offices have a procedure to address student grievances or complaints in place.

12. *Information about the support services programs*

Some service offices must become more efficient in notifying students about services offered. A major effort needs to be made in order to keep the community informed about policies and procedures concerning how each service is carried out. In those cases, which indicate that this procedure is not developed or written, the administration must generate resources to accomplish this fundamental need.

13. *Principles and procedures which govern the sports program*

Students are encouraged to participate in organized sports and other recreational physical activities sponsored by the Department of Athletic Activities. UPRM is a member of the Inter-University Athletic League and fully participates in a variety of intercollegiate sports. It is also a corresponding member of the National Collegiate Athletic Association (NCAA). The Inter-University Program offers 15 men and 13 women sports for students who demonstrate superior athletic abilities. Men sports include baseball, basketball, cross-country, judo, soccer, softball, swimming, table tennis, tennis, track and field, decathlon, volleyball, weight lifting, wrestling,

and cheerleading. Women sports include weight lifting, basketball, cross-country, judo, softball, swimming, table tennis, tennis, track and field, heptathlon, volleyball, cheerleading, and Tae Kwon Do.

The intramural program provides activities and competitions that take place mostly on campus grounds. Students, faculty, and staff participate in a wide variety of activities including basketball, judo, soccer, indoor soccer, softball, swimming, tennis, table tennis, tennis, volleyball, water polo, weight lifting, and wrestling. Student teams in the intramural program may participate in the extramural program and compete with other universities and non-university groups. The Department of Athletic Activities allows the use of campus athletic facilities and equipment in support of recreational non-traditional unorganized sports. Equipment and facilities are available to students and to university sponsored teams in their free time.

Athletic facilities include a gymnasium, a coliseum, a 50-meter swimming pool, basketball, volleyball, tennis courts, a synthetic running track, a weight-lifting gymnasium, a training and conditioning exercise room, an athletic field, a softball park, as well as judo and wrestling areas.

Recommendations
1. Offices need to orient students and keep them informed about the services provided. The students must be able to identify support services, the office in charge of providing the service, and how to access it. The high percent of students that do not know about a service pose a challenge to the support services offices to educate the diverse student community.
2. A more aggressive strategy must be implemented to enforce the assessment plan in each student service office. The office must keep records or evidence of every activity undertaken or service provided.
3. Each office has to develop a procedure to address student grievances in order to improve the service.
4. Each office must create and publish procedure manual. The Web site should not be the only way to publish these procedures.
5. UPRM must utilize information of the review of financial aid practices to adequately support admission and retention efforts. The Office of Financial Aid should work hand in hand with the Registrar to know if financial problems are causing many students to drop out. The Office of Financial Aid has to adequately support admission and retention efforts.
6. The Continuous Improvement Education Initiative office should survey the students annually in order to know their perceptions of the support services provided.

Standard 10: Faculty

Background

The faculty at an institution of higher education is the key to develop competent and prepared professionals and well-rounded citizens. The MSCHE's *Characteristics of Excellence in Higher Education* indicates that "faculty are central to each institution's teaching and learning activities. ..." and that "A professional is qualified by virtue of education, training, experience or appropriate skills" (p. 28).

The purpose of the task force charged to assess faculty at UPRM was to determine if the instructional, research, and service programs are devised, developed, monitored, and supported by qualified professionals. The task force found that the staff is highly competent with qualified professionals in both teaching and research. However, the data reflects a lack of dissemination of procedural information, which is an important concern for faculty members. Although there has been an increase in the number of Ph.Ds and the focus is to continue hiring more, this trend must be strengthened. In addition, there has been an increase of faculty members in some departments, yet there are few new positions available to some departments and more faculty positions are needed. The student population has increased since 1994 and more professors are needed so that sections do not become overcrowded (for complete data, see Task Force 7 report).

The 1995 MSCHE report and the Periodic Review Report (PRR) 2000 identified the strengths and weaknesses of the UPRM faculty. Among the strengths were that the faculty was "highly competent and strongly committed to excellence in teaching, and academic freedom remains central to institutional commitment at UPRM." After analyzing the data obtained for this report, we see that the institution continues to be recognized for teaching. In time and by correcting the areas which need attention, UPRM will continue to be a model of excellence in higher education. As for weaknesses, UPRM needs to develop incentives to promote more research and to increase the percentages of Ph.Ds in some faculties. Although there has been an increase in research and there are more PhDs in the different faculties, mechanisms are needed to attract faculty.

Findings

Evidence and in-depth data are available in the Task Force 7 report.

1. The mission and goals are made available, yet there is a discrepancy among the administrators and faculty as to how well they are communicated. Faculty members are not fully aware of the expectations regarding teaching, research, advising, and service. Although there is checklist in the General Regulations, the procedures and the weights of different activities for promotion and tenure are ambiguous.
2. The faculty continues to be highly competent and their roles and responsibilities are clearly defined. A need for more professors in each college is clearly seen.
3. Faculty has the opportunity to contribute in the designing, maintaining, and updating curricula at the UPRM.
4. Data shows that the faculty demonstrates excellence in teaching. Deans and directors have identified the characteristics which demonstrate excellence in teaching and were used by the professors in their colleges (see Task Force 7 report, pp. 11-12).

5. Opportunities exist for the enhancement of teaching skills, yet more are needed.
6. The faculty believes the administration is concerned with their professional development and provide support, both in and out of the classroom, as evidenced by the data. Although many professors do take advantage of these opportunities, more could still get involved.
7. UPRM defines and communicates the necessary academic qualifications and is successful in hiring and retaining faculty who match these qualifications.
8. The hiring and promotion decision procedures are not perceived positively. This may be caused by a lack of standardization in the procedures. Salary decision procedures are defined by the system and lack flexibility; they are not perceived positively either. The majority of the faculty believes that policies and procedures are tied to political influence.
9. The question if the UPRM sought diversity among the faculty was not considered in previous MSCHE reports. As of 2003, the Office of Institutional Research and Planning is documenting diversity in terms of race. Although there is not much race diversity, there is an environment of promoting diversity among the faculty. Future data will determine if this continues to be the case.
10. UPRM seems to be very effective in protecting academic freedom for every member of the faculty, regardless of status or rank.
11. Student learning outcomes have not been entirely implemented in all the academic departments, although this is in process. As a result, these outcomes have not yet been tied to faculty characteristics and performance and reviews and analyses cannot be conducted. Once the plans are in place, there will be evidence to support the educational elements of performance and outcomes assessment.

Recommendations
1. As stated before, there is a need to familiarize, formalize, and standardize the following procedures for the faculty to be fully informed:
   - Dissemination of job expectation information
   - Teaching/research evaluation for tenure and/or promotion
   - Recruitment
   - Dissemination of salary information

   Notes:
   - The higher administration needs to develop a technique for dissemination of specific information regarding what criteria are used for personnel evaluation (tenure, promotion, hiring, sabbaticals) or any other important information about the institution such as its mission, goals, and policies. This particular task should be a top-down model. Deans need to assure the information is clear to the department directors who will be responsible for disseminating the information to all the faculty members. Administrators need to attend training sessions to allow for dissemination of information. Workshops on procedures should be given to the administrators immediately for them to facilitate information to the university community.
   - Evaluation instruments need to be standardized to allow for consistency and fairness among the faculty. The evaluation instruments should be updated with clear criteria and numbering/percentages given to all items. This will allow for the evaluation process to

be as transparent as possible. The instruments should be presented to the faculty and agreed upon as soon as possible.

2. The faculty continues to be highly competent, but in order for this to continue, more opportunities are needed for professional development. Funding is also needed to support those opportunities and to allow for more workshops led by qualified personnel.

3. There has been an increase in the number of faculty members in some departments, yet more are needed in the different colleges. There is an overall concern that there are few new positions available to some departments. There has been an increase in student population since 1994 and more professors are needed so that sections do not become overcrowded.

4. Although the number of faculty conducting research has increased, additional incentives are needed to stimulate more professors to participate in research, especially if the goal of UPRM is to become a research institution.

5. Although there has been an increase in salary, UPRM should look for ways to compete with institutions in the United States so as to retain existing personnel and to be able to hire specialized personnel in the future.

6. UPRM needs to implement the student outcomes performance plans. These plans can then facilitate assessing faculty characteristics and performance and help towards student/faculty excellence in our institution.

Commendations

1. Continuous Improvement Education Initiative (CIEI)
    The chancellor is to be commended for opening the CIEI office, an office that will continue after the accreditation process is completed. The CIEI office will facilitate any accreditation procedure and serve as a model for those institutions in need of information. The office will also work with the OIIP and this will allow for the collecting of materials and information about UPRM which will be available to the community.

2. UPRM Faculty
    The faculty needs to be commended for their continued commitment to excellence in teaching and for conducting research, which has allowed UPRM to be widely recognized. Students receive a high quality education and are recognized in the United States and Puerto Rico, thereby making the UPRM an outstanding institution.

Standard 11: Educational Offerings

Background

In the 1995 MSCHE response prepared by the Evaluation Team, Educational Offerings was covered under section V. FACULTY AND ACADEMIC PROGRAMS, specifically under the topic ACADEMIC PROGRAMS on pages 17-18. This report made certain observations, which are summarized below (for details see Task Force 8 report).

1. *It takes too many years to complete a degree, whether on the graduate or undergraduate level in all areas of this university.*
2. *The requirement of an excessive number of credits for graduation may prompt some students to carry heavy course loads each semester, which may be another possible contributing factor to low achievement and retention figures.*
3. *Special attention must be paid to courses which are required of all students and to courses with unusually high failure rates.*
4. *An excessive time period is required for the approval of academic programs.*
5. *UPRM needs to better coordinate the issue of core requirements, credits required for graduation, "rigor", and other matters across disciplines.*
6. *In order for the campus to achieve greater unity and cohesion, each of its constituent parts must occupy a place of honor, or at least be given an honorable place.*

The Periodic Review Report (PRR) 2000 (submitted in June 2001), Section 2.2.4 on Academic Programs reported the eleven significant academic changes since the year of the last accreditation period for the MSA (1995). The changes are summarized below (for details see Task Force 8 report).

1. A major curricular revision of the Baccalaureate program in Physical Education (1995).
2. The creation of a Baccalaureate in Office Administration (1997).
3. The approval of a proposal for a Master's degree in Nursing from the UPR Medical Science Campus at the UPRM campus through video conferencing (1999).
4. The approval of a new Ph.D. program in Information and Computational Sciences and Engineering. The program is interdisciplinary, representing a joint effort between the Department of Mathematics and the Department of Electrical and Computer Engineering (2000).
5. The approval of a new Master's degree program in Scientific Computing (2002).
6. The creation of a Ph.D. program in Chemical Engineering (1999).
7. The approval of a new Master's degree program in Industrial Engineering (2000).
8. A curricular revision of the Master's Degree in Business Administration (2000).
9. Inactivation of the Associate Degree in Secretarial Sciences and the Bachelor's degree in Economics (1997).
10. The suspension of the Associate Degree in Nursing (1998).

Task Force 8 is in charge of assessing how UPRM has been addressing its educational offerings since the last MSCHE accreditation. Although the current Task Force 8 was established in February 2003, it evaluated the success of the educational programs at the graduate and undergraduate level currently offered at UPRM, including those that have been created since the last accreditation.

Findings

At present, UPRM offers graduate and undergraduate education with five Ph. D., 33 Master's, and 53 Bachelor's degrees programs.

Significant changes to the programs after 1995 and not reported in PRR 2000

Since 1995, significant academic changes have occurred at UPRM, which include the following:

- A proposal for a Master's degree in Materials Science and Engineering is currently awaiting approval by the UPRM Administrative Board (2004).
- A proposal for a BS degree in Computer Science from the Mathematics Department is currently awaiting approval by the UPRM Administrative Board (2003).
- Proposals for a BS degree in Computer Science and Engineering, and Software Engineering from the College of Engineering were approved by the Academic Senate. The courses proposed for these programs are under evaluation by the Course Committee of the Academic Senate. Once all the courses are approved by the Academic Senate, the programs will go for evaluation and approval to the UPRM Administrative Board (2003).
- A proposal for a Master's degree in Kinesiology from the Physical Education Department is currently awaiting approval by the UPR University Board (2002).
- A proposal for a Master's degree in Applied Statistics from the Mathematics Department is currently awaiting approval by the UPR University Board (2002).
- A proposal for a Doctoral program in Applied Chemistry from the Chemistry Department was approved in 2003 and began in January 2004.
- A proposal for a Master's degree in Technology and Biophysics Resources Management from the College of Agricultural Sciences is currently awaiting approval by the Board of Trustees (2001).
- A proposal for a curricular revision of the BS degree in Mechanical Engineering from the College of Engineering is currently awaiting approval by the University Board (2001).

Significant changes to the programs after 1995, reported in PRR 2000

- A Ph.D. program in Chemical Engineering was approved in 1999 and began its academic offerings in January 2000. This program has graduated three students since its inception.
- A new Master's degree program in Industrial Engineering was approved in 2000 and began its academic offerings in August 2000. This program has graduated 15 students since its inception.
- A curricular revision of the Master's Degree in Business Administration led to the creation of four specializations: Finance, Marketing, Industrial Management, and Human Resources (2000).
- A Ph.D. program in Computer and Information Science and Engineering was approved in 2000. This program is interdisciplinary, representing a joint effort between the Department of Mathematics and the Department of Electrical and Computer Engineering. In June 2004 the first Ph.D. student graduated from this program.
- A Master's degree program in Computer Science from the Mathematics Department was approved in 1999 and began its academic offerings in August 2001.
- A BS degree in Office Administration from the College of Business Administration was created 1997.

- A major curricular revision of the BS degree in Physical Education from the College of Arts and Sciences was approved in 1995.

Other Educational Programs Currently Offered

Other educational programs are offered under the Office of the Dean of Academic Affairs. These are shown in Table 8.

Table 8. Programs offered by the Office of the Dean of Academic Affairs

Program	Center or Department under the Office of the Dean of Academic Affairs
Professional Enhancement Program	Center for Professional Enhancement (CEP)
Air Force ROTC Program	Department of Aerospace Studies
Army ROTC Program	Department of Military Science
Education Program	Division of Continuing Education and Professional Studies
Teacher's Training Program	Division of Continuing Education and Professional Studies
Continuing Education Program	Division of Continuing Education and Professional Studies
Special Training Program	Division of Continuing Education and Professional Studies
Online Teaching and Learning Program	Institute of Educational Development and Learning on Line (acronym in Spanish IDEAL)

Significant Changes to the Educational Programs after 1995
- Creation of the Institute of Educational Development and Learning on Line (IDEAL in Spanish) in January 2003.
- Creation of the Center for Professional Enhancement (CEP in Spanish) by the UPRM Administrative Board for new professors.

Other programs on campus that have a special impact on research and education:
- Puerto Rico Resources Center for Science and Engineering (RCSE)
- Puerto Rico Transportation Technology Transfer Center
- Puerto Rico and Virgin Islands Strong Motion Program (PRVISMP)
- UPR Sea Grant College Program
- Pre-College Engineering Program

Significant changes to the UPRM Library after 1995
Some important changes have occurred in the UPRM Library in response to the 1995 Self Study Report. For example, an Institutional Evaluation Committee was formed, which comprised faculty members, a professional librarian, and the Director of the Library. This committee evaluated the serials titles and recommended the cancellation of titles which were not being used or which were too specialized for our patrons. This action resulted in a $151, 000.00 savings, which can now be used to cover part of the increase in subscription costs for professional journals. The Ariel System, an electronic transmission system for the delivery of documents,

was acquired in January of 1996, the first of its kind in any higher education institution in Puerto Rico.

A special collection for the use of faculty, researchers, and students of Spanish and Linguistics in general was set up on October 16, 1997. This collection consists of extremely valuable bibliographic material and memorabilia donated to the Library by two distinguished faculty members, Dr. Josefina Rivera de Alvarez and Dr. Manuel Alvarez Nazario. This collection is housed in the South wing of the Library. A large area on the first floor in the South wing has been converted into the Electronics Resources Center. This expansion now enables the Library to provide approximately sixty computer stations with access to the Internet and electronic databases.

With funds assigned through a Title V Proposal, the Library prepared two multimedia rooms with the latest technological advances such as a "smart board" which are being used for library instruction and workshops. Two projections rooms with capacity for 60 users each and another with capacity for 30 users are provided in the Educational Technology Area. These rooms are used by faculty members to complement their courses. The Marine Sciences Collection was moved to its new location in May, 1999 and is now housed on the first floor of the Physics Building in an area of approximately 2,100 sq. ft.

Significant changes to the Computer Centers after 1995
- Presently, communications with the outside world is accomplished through the Central Administration Office using two T1 lines. Two additional T1 lines have been ordered to improve our communications technology.
- A Digital Alpha 8250 computing system provides support for the administrative functions while a Digital Vax 6610 serves the academic functions of the university.
- Currently, UPRM has 55 computer laboratories or centers with a total of 827 personal computers. All graduate and undergraduate students and faculty at UPRM have regular access to these facilities (see Task Force 8 report for a detailed list of UPRM's Computer Centers).

Findings through the answers to the charge questions
The objective of this section is to present the findings related to the questionnaires and the survey.

Educational offerings related to mission:
1. Around 80% of the administrative personnel believe that each specific academic program has been designed in line with the mission of UPRM.
2. Around 60% of the persons in administrative positions who answered the questionnaires either agree or strongly agree that the academic program goals and outcomes are communicated clearly to students.
3. Around 82% of the interviewed students agree or strongly agree that the academic goals and outcomes are communicated clearly to them.
4. Around 80% of the persons in administrative positions who answered the questionnaires believe that each course has been designed looking towards the mission of UPRM;

however a lower percentage (69.23%) either agree or strongly agree that the design of each specific classroom learning activity is linked to the mission of UPRM.

5. Proposed new programs are carefully evaluated in terms of congruence with the UPR system and UPRM's mission and strategic plans. Certification 93-113 of the UPR Board of Trustees establishes the policy regarding the creation of academic programs. A section of its certification reads "…Any new program must respond to the general mission and objectives of the UPR and be in agreement with the strategic plan for each campus. …"(for the certification see Task Force 8 report).

6. New academic programs take too long to be approved because they must be approved by many levels of bureaucracy, including the Board of Trustees.

Undergraduate and graduate programs:

1. Data indicates that 71.79% of the respondents from the administrative personnel and 91.49% of the students think that in general, student-learning outcomes are included on course syllabi. 84.62% of the respondents from the administrative personnel and around 81% of the students think that the academic programs address adequately the professional competence. They also believe that the academic programs are designed to foster coherent student learning.

2. Around 62% of the respondents from the administrative personnel and 77% of the students think that the educational programs are designed to promote synthesis of learning across courses and activities.

3. A significant amount of extra- or co- curricular experiences exist that contribute to the total educational environment (e.g. out-of-class lectures, exhibitions, civic involvement, community service, etc.). Examples of offices, centers, departments, programs, and student organizations that provide these experiences to the students are: Center for Applied Social Research (CISA), NASA-Partnership for Spatial & Computational Research (PaSCOR), Center of Research Excellence in Science and Technology (CREST), Tren Urbano UPR/MIT Professional Development Program, The Cooperative Education Programs, Department of Athletic Activities, Department of Band and Orchestra, Department of Nursing, Department of Counseling, Student Exchange Programs and International Student Services Office, National Exchange Program, International Student Exchange Program, Social and Cultural Activities Office, among others (see the Task Force 8 report).

Periodic evaluation of effectiveness:

1. The departments of the Colleges of Agricultural Sciences, Arts and Sciences, and Business Administration are working on the development of their assessment plans. However, the departments of the College of Engineering have their assessment plans already developed (for examples of the assessment plans refers to task force 8 report).

2. The last time the policies and procedures by which degree requirements are established were examined was in 1993. The governing body of the UPR system is the entity that established a framework for program creation and revision, which involves several layers of evaluation and approval, both on campus and at the Central Administration. As a consequence, the process for academic change at UPRM is rigorous, thorough, and, as a result, slow.

3. UPRM policy and procedure by which student performance is evaluated is examined periodically and published yearly by UPRM in the catalogs in the section, Academic Standards, specifically under the sub-section Retention Standards. The standards include the policy for students to have a satisfactory academic progress, or to be on probation, or to be suspended from UPRM.
4. Examples of the ways UPRM facilitates students' progress are:
   - The Department of Counseling under the Office of the Dean of Students offers a wide range of services.
   - A tutorial program offers remedial help services in basic academic areas such as Mathematics, Spanish, English, Chemistry, and Physics.
   - The GEO-RUM Technology Training Center is designed to assist students with computer literacy needs.
   - Pre-calculus Intervention Laboratory is designed to help students with their Mathematics deficiencies.
   - English Intervention Laboratory is analogous to the Pre-calculus Intervention Laboratory.
   - Students receive academic advising throughout the academic year from either a professional in that field or the department chair.
5. Policies and publications cover transfer credits for both undergraduate and graduate programs. The policies for the undergraduate programs are stipulated in Certification No. 81-82-93 of the UPRM Administrative Board (UPRM Internal Transfer Policy) and Certification No. 96-97-115 of the UPR Board of Trustees (UPR Institutional Transfer Policy). For graduate programs, these are covered by Certification No. 97-21 of the UPRM Academic Senate. The publications are the *Undergraduate Catalog* and the *Graduate Catalog*.
6. Around 23% of the respondents to the questionnaires did not know anything about the existence of the undergraduate and graduate transfer credit policies.
7. UPRM has clear policies with respect to the transfer of students. These policies are available to students through the *Undergraduate Catalog* (refer to the catalogs for more information on the policies, or the Task Force 8 report).

Resources for instruction:
1. In the Colleges of Business Administration and Engineering more than the 75% of the respondents agree or strongly agree that the facilities are adequate. In the College of Arts and Sciences, 60% of the respondents think that the facilities are adequate, but in the College of Agricultural Sciences only 22.22% of the respondents think the facilities are adequate.
2. In the Colleges of Agricultural Sciences, Arts and Sciences, and Engineering more than 55.56% of the respondents believe that the instructional equipment is adequate. In the College of Agricultural Sciences and the College of Arts and Sciences, around 45% and 33%, respectively, think that the instructional equipment is not adequate. Also, the administrative personnel of the College of Business Administration think that the instructional equipment available to support their programs is not adequate.
3. In the Colleges of Agricultural Sciences, Arts and Sciences, and Engineering, more than 66.67% of the respondents believe that the instructional resources are adequate. In the College of Agricultural Sciences around 22% of the respondents believe that the

instructional resources are not adequate. Also, the administrative personnel of the College of Business Administration think that the instructional resources available to support their programs are not adequate.

4. Data indicates that 72.73% of the respondents to the questionnaires from the administrative personnel, 64% of the respondents to the questionnaires from the faculty, and 78.69% of the surveyed students agree or strongly agree that the library resources are easily accessible to students.

5. Also, 84.84% of the respondents to the questionnaires from the administrative personnel, 57% of the respondents to the questionnaires from the faculty, and 77.74% of the surveyed students agree or strongly agree that the library services to develop information literacy skills are easily accessible to students.

6. Finally, 84.84% of the respondents to the questionnaires from the administrative personnel, 86% of the respondents to the questionnaires from the faculty, and 84.79 of the surveyed students agree or strongly agree that the internet usage and computer laboratories are easily accessible to students. However, looking at the responses by college, the respondents of the Colleges of Agricultural Sciences and Arts and Sciences think that these are not easily accessible to students.

Recommendations

After analyzing all the findings, Task Force 8 recommends the following:

1. Disseminate the academic goals and outcomes, and the student learning outcomes to the students more aggressively.

2. Examine the mission more carefully at the moment of designing the classroom learning activities.

3. Review periodically the policies and procedures by which degree requirements are established and find ways to streamline the approval of programs of study, so that improvement and change in the area of curriculum may be expedited.

4. Explain to the administrative personnel and students what synthesis of learning means. Improve the way academic programs promote the synthesis of learning across courses and activities.

5. Encourage the Colleges of Agricultural Sciences, Arts and Sciences, and Business Administration to work intensively in the development of their program outcome assessment plans.

6. Be more aggressive concerning the dissemination of the transfer credit policies to all sectors.

7. Improve facilities for the Colleges of Agricultural Sciences and Arts and Sciences.

8. Improve in some way the instructional equipment and resources to support academic programs at the Colleges of Agricultural Sciences and Arts and Sciences.

9. Make a huge investment for the acquisition of instructional equipment and for the acquisition or recruitment of instructional resources to support the academic programs of the College of Business Administration, since their new building, which is now under construction, will need to be equipped completely.

10. Help the Colleges of Agricultural Sciences and Arts and Sciences to increase the resources they have available to provide internet usage to their students and to increase the number of computers available in their computer laboratories.

Standard 12: General Education

Background

The 1995 Self-Study Report does not dwell sufficiently on the subject of General Education at UPRM. In 1999, the focus on assessment of General Education at the College of Arts and Sciences was evidenced in a survey conducted by the Dean of Arts and Sciences. Because of changes in administrative personnel, the results of the survey were not disseminated and the process remained incomplete.

What follows is what this task force considers is an initial attempt at finding out what needs to be done in the area of General Education at UPRM in order to guarantee continuity and permanence to assessment processes and to maintain the tradition of academic excellence articulated by the UPRM mission and vision.

Findings

In general, Task Force 9 discovered inconsistency in semantics or in the way various sectors of UPRM referred to general education courses. Nonetheless, all curricula at UPRM meet general education requirements. (Refer to Tables 1-11 in the complete Task Force 9 Report)

Specific Findings

Strengths
1. All academic programs at UPRM include socio-humanistic requirements for the students to complement technical or professional preparation.
2. UPRM requires all undergraduate students to take a minimum number of requirements in general education courses.
3. UPRM includes in its philosophical framework all components of an ideal general education program.
4. Periodic curricular revisions have included professors in formative assessment and feedback that have resulted in better curricula and course offerings.

Areas Needing Improvement
1. Although included and clearly identified in some curricula, not all curricula identify or partially identify those courses which meet general education criteria.
2. In departments where general education assessments are in place, there is no evidence of continuity of assessments.
3. UPRM establishes two credits in physical education courses as the only institutional requirement for all students.
4. An institutional process for the assessment of general education outcomes does not exist within the institutional plan for assessing student learning.
5. All evidence of assessment has not been systematically centralized and documented so that it can be made available to researchers.

Observations
No official definition of the term "general education courses" can be found in official UPRM publications and courses fulfilling the general education requirement are not specified in all undergraduate programs. Only 12 of the 54 undergraduate programs specify the number of

required credits in general education courses. In the past, surveys provided to employees and graduating students have included questions about general education courses. The results have shown that UPRM's general education component is adequate, yet there is room for additional improvement in areas such as oral and written communication. Course revisions and assessments need to be continuously based on these surveys.

Recommendations
1. UPRM *Bulletin of Information* needs to consistently specify a definition of general education, general education courses, and general education requirements in each undergraduate academic program.
2. The Institutional Assessment Plan must make provisions for the inclusion of the assessment of the general education component.
3. Foundation courses need to show reinforcement of skills and use of learning assessments through consistent documentation.
4. Educational leaders such as the academic deans need to review structures within their faculties to ensure systematic, continuous, and reliable assessments in the area of general education that will improve student learning.

Commendations

Assessment results have led to improvements in various programs that worked their curriculum revisions since the last MSA visit in 1995. The implementation of ABET's EC2000 criteria made more assessments possible which led to the submission of new curriculum revisions such as those from the departments of Mechanical Engineering (now under review by the University Board), Electrical Engineering, and, recently, Computer Engineering.

Assessment results have led to other curricular revisions from Arts and Sciences such as those in the programs of Economics (Cert. 02-55) and Physical Education (Cert. 03-23 and 03-24). Similarly, the Academic Senate has under revision the Chemistry, Social Sciences and Political Sciences curricula.

Currently every department is working on its own general assessments. Recent certifications by the Academic Senate related to Mathematics and Social Sciences are examples of this improvement. This process guarantees possibilities for evolvement.

Process Recommendations
Suggestions
Regarding the process followed by this task force, it can be said that the question and answer written interviews lent themselves to obtaining specific information in a short period of time. Yet, the relatively limited number of responses to the questions for General Education (Standard 12) makes it difficult to assess the true situation within academic departments on campus. Generally, based on this task force's interpretation of the comments made by those who responded, departments feel that general education requirements are such that students can be expected to be able to build on that acquired knowledge once they reach their major department. Therefore, groups working after 2005 should initiate a dialogue on General Education involving focus groups throughout UPRM. It would be helpful to widen sources of data by gathering responses and feedback from graduating classes and second-year students.

Standard 13: Related Educational Activities

Background

Task Force 10 dealt with basic skills, certificate programs, experiential learning, non-credit offerings, distance learning and contractual relationships at UPRM. The purpose was to evaluate if these programs were aligned with UPRM's mission, goals and objectives. These programs were not described in detail in the last Self Study Report to MSCHE; however, within the last eight years, the university has improved these programs.

In 1995 the Central Administration changed the formula to calculate the General Application Index (IGS) as a result more students enter the university with weaker backgrounds in Mathematics and English.

The number of certificate programs offered at UPRM is increasing to benefit more students and the general audience; these programs have been created and offered by academic departments, either individually or jointly. Also, UPRM has been encouraging students to take advantage of the Cooperative Education Program and internship programs to obtain extra curricular experience before graduation.

Two years ago UPRM began to offer some courses through distance learning. In order to improve the offering, an Institute of Educational Development and Learning on Line (acronym in Spanish IDEAL) was created under the office of the Dean of Academic Affairs. IDEAL's main goal is to prepare faculty interested in offering courses through distance learning. Also, UPRM has signed Memorandums of Understanding (MOUs) with different universities on the mainland, as well as with universities from Latin America and Europe, to allow students to go on exchange programs to spend a semester or a year abroad.

After studying the final Self-Study Report submitted to Middle States in 1995, the Periodic Review Report 2000, the Follow-up Report submitted in 2003, and analyzing the collected data, Task Force 10 found that UPRM has made significant improvements in the institutional programs and activities that are carried out by different departments and divisions.

Findings

The findings for each of the programs related to Standard 13 that are offered at UPRM are presented below:

Basic Skills
- Systematic procedures are in place to identify students who are not fully prepared for college level study in English and Mathematics. These include evaluations of College Board (CEEB) scores and high school transcripts or transfer transcripts.
- The English Department has established that freshmen students with a score lower than 460 in the English as a Second Language Achievement Test offered by CEEB must take a diagnostic exam. If the students pass the exam, they are then placed in the first English course; otherwise they must register in a remedial English course.

- The Mathematics Department performed a study to determine the causes for a high failure rate in its Pre-calculus course. The Department then submitted a proposal to the Academic Senate to institutionalize a diagnostic exam for those students with scores less than 651 in the Mathematics achievement test offered by CEEB. Students must take a diagnostic exam that is designed to identify deficiencies in the areas of Basic Arithmetic, Rates, Ratios, Proportions, Percents, Basic Algebra and Basic Geometry. Students who pass the exam may take Pre-calculus I during their first semester. Those who do not pass the exam must register in a Remedial Mathematics course instead.
- Between 1996 and 2004 a total of 20,593 students were admitted. Of these, 12,212 students had deficiencies in Mathematics and 4,567 in English.

Figure 11 shows the total number of students between 1996 and 2004 and the percentage of students with deficiencies in Mathematics and English.
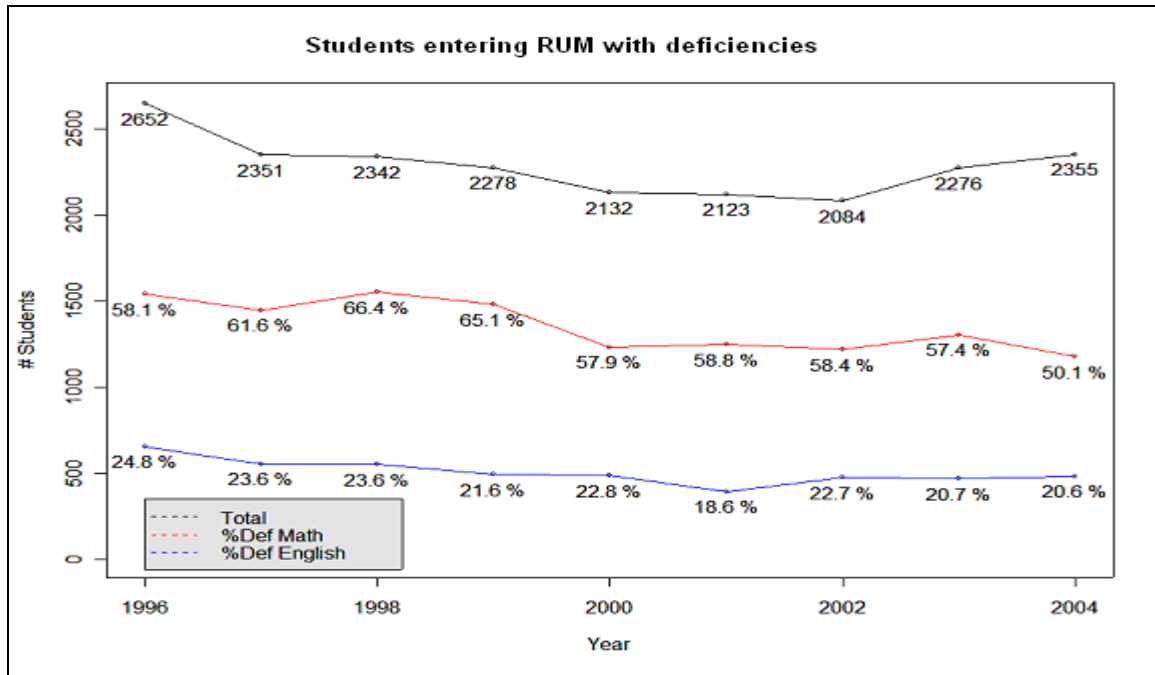

Figure 11. Total students and percentage with deficiencies in English and Mathematics

- Figures 12 and 13 show the percentage of students with deficiencies in English and Mathematics between 1996 and 2004 by college. Freshmen students coming to UPRM have more deficiencies in Mathematics than in English, especially in the Colleges of Agricultural Sciences and Business Administration, and the Art's students in the College of Arts and Sciences.
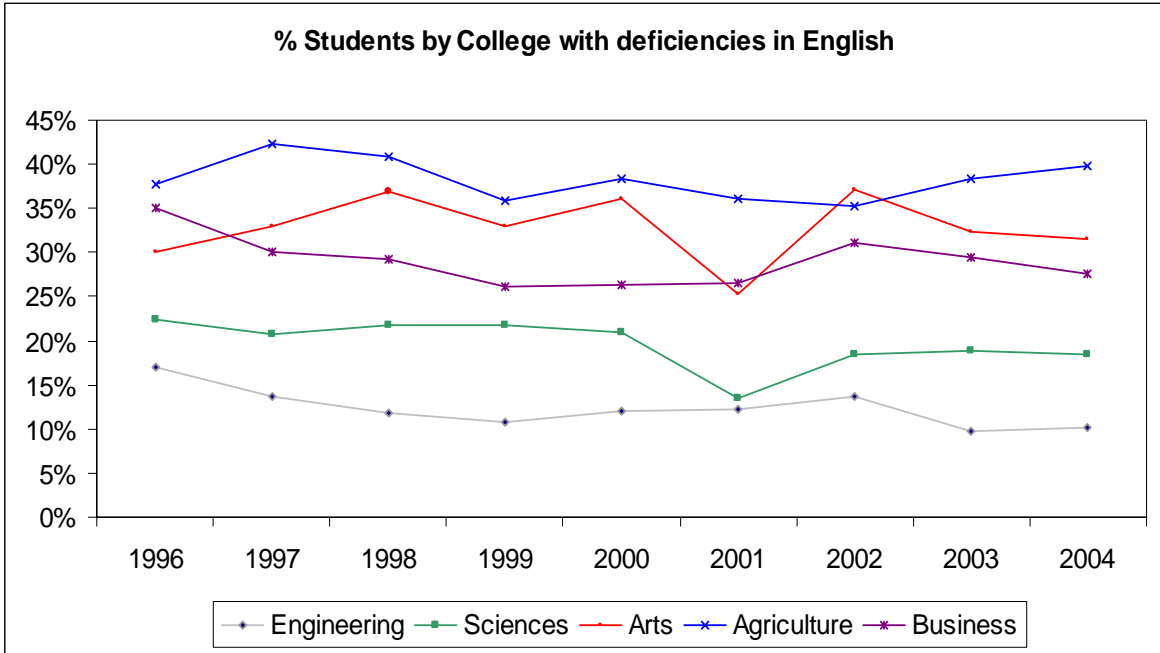
Figure 12. Percentage of students with deficiency in English by College since 1996
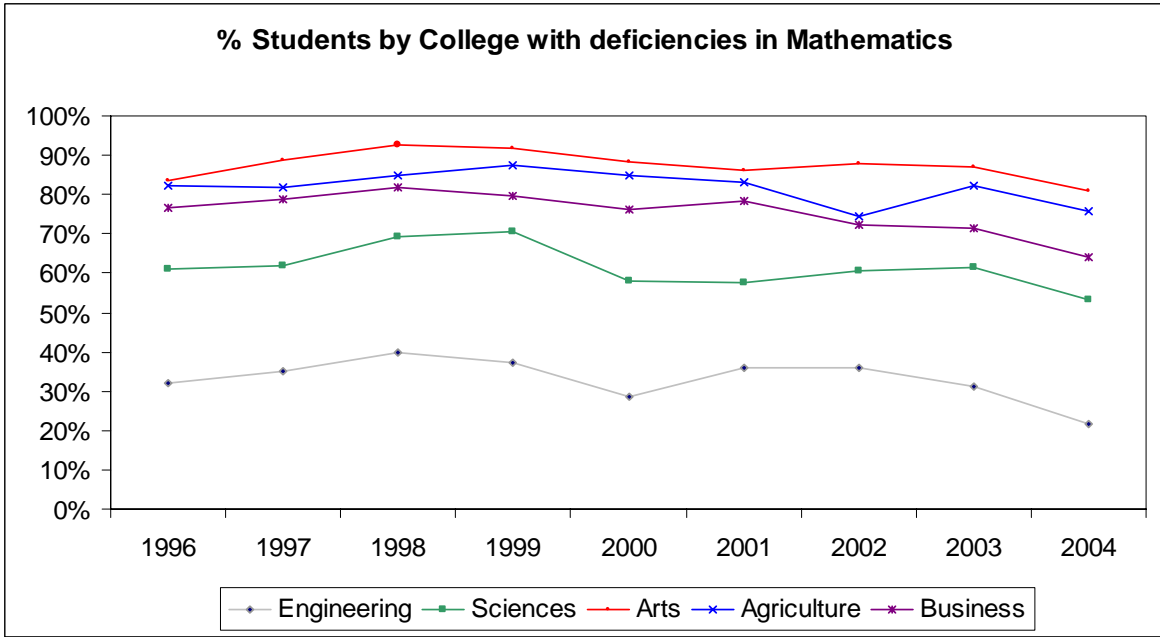
Figure 13. Percentage of students with deficiency in Mathematics by College since 1996

- Also, the Guidance and Counseling Department and some academic departments offer a one-hour per week lecture course related to diverse topics such as academic regulations, study skills, career planning, personal development, computer literacy, and institutional resources. This course does not carry academic credit and has been designed to enhance students' academic and social integration. This course also helps freshmen retention.

Certificate Programs
- UPRM offers various certificate programs with expectations for student learning clearly articulated within the program documentation.
- The Division of Continuing Education and Professional Studies offers certification programs for high school teachers. In order to obtain a teacher's certificate, students must take 33 credits related to assessment, curriculum, history, and methodology. This program is offered to students interested in becoming intermediate or high school teachers in areas such us Sciences, Physics, Mathematics, Social Sciences, English, Spanish, Physical Education, and Biology.
- Pesticide Applicators, Commercial Pesticides Applicators and HACCP – Food Safety, Certificate Programs are offered by the Agricultural Extension Service and are primarily based in four major program areas: Agricultural Marketing and Natural Resources (ANR), Family and Consumer Services (FCS), Children and Youth (4-H), and Community Resources Development (CRD).
- The Project Management Certificate Program is a joint effort between the College of Business Administration and the College of Engineering. The requirements to obtain the certificate can be completed in a year. The program began in 2003 with 99 students. Students interested in obtaining this certificate must take 12 credits, including one course from the College of Business Administration, one from the College of Engineering, one application course, and an elective course.
- Environmental Engineering Certificate Program is offered by the Department of Civil Engineering. Students registered in this program must complete 15 credits in either Civil Engineering or Chemical Engineering. This certificate is based on courses within the curriculum, and there is no additional need to seek approval from the university authorities.
- The Center for Economic Development under the Dean of Academic Affairs offers a Certificate program in Economic Community Development. This certificate is offered to community leaders.
- Two new certificate programs are also under study, one in Aerospace Engineering under the Department of Mechanical Engineering, and Meteorology under the Department of Physics.

Distance Learning
- In its planning for distance learning, UPRM has operated within applicable legal and regulatory requirements. Offerings have been approved through official actions. They are offered through their respective departments and meet the criteria of any external agencies pertinent to the specific programs.
- All distance-learning offerings are department-regulated in the same manner that other offerings are regulated.
- Courses delivered in a distance education mode are designed, approved, staffed, administered and systematically evaluated through established institutional procedures and governance structures accountable to the Dean of Academic Affairs. While the delivery mode is different than the same course offered in the traditional face-to-face manner, all content is the same; that is, the course through distance learning is the same course as the traditional. In turn, all advising is done within the departmental framework and the course is conducted by approved faculty who are supervised and evaluated in accordance with consistently applied institutional practices.

- At the end of the academic year 2003-2004, only 7 out of 26 academic departments were offering some courses taught through distance learning. Those departments are Agricultural Education, Biology, Hispanic Studies, Chemical Engineering, Industrial Engineering, Electrical and Computer Engineering, and Social Sciences. A limiting constraint to offer those courses is the lack of a better internet infrastructure. In addition, UPRM has a WebCT license that is used to prepare and offer courses on line.

Noncredit Offerings
- Non-credit offerings are designed, approved, administered, and periodically evaluated under established UPRM procedures. Over the past years, in a systematic effort to develop programs that effectively respond to general population learners, the Division of Continuing Education and Professional Studies has been offering courses in different areas of interest for the community. Some of these courses are also offered to UPRM employees.
- Over the last nine years the Division of Continuing Education and Professional Studies has offered 508 courses, 226 special projects, and has served 26,036 students.
- The English Department together with the Center for Professional Enhancement offers an English course for foreign graduate students.

Experiential Learning
- UPRM allows its students to take courses in other institutions, register for a Cooperative Education Program, or spend a semester or a year on internships programs.
- UPRM awards credit for experiential learning that is supported by evidence in the form of an evaluation of the level, quality and quantity of that learning. The credit is awarded according to similarity of course definition with the UPRM catalog.
- Credits for internship programs are awarded in specific courses in which the student has an off campus experience and is supervised by the employer and the UPRM coordinator.
- According to information provided by the Registrar's office, approximately 0.8% of the students take courses outside UPRM during regular semester, and 3% of the students take courses outside UPRM during the summer.
- Most of the academic departments allow students to take courses outside UPRM if they are equivalent to our courses. Students, to be eligible, must be in good academic standing.
- Several courses at UPRM allow students to have extracurricular experiences outside the classroom. In these courses students must develop projects related to real problems.

Contractual Relationships and Affiliated Providers
- UPRM has various internal and external articulation agreements. Each agreement uses the UPRM's mission and academic guidelines as a base for development. The appropriate academic department director, the dean of the college, the Dean of Academic Affairs and the chancellor are involved in the contract development to ensure that it meets the UPRM's mission and goals. The chancellor ultimately signs the agreement as a final check of consistency with UPRM's mission and goals. Sample agreements are available at the Office of Student Exchange Program.
- Contractual programs are planned based on the needs of the community, the students, and each specific department. Examples of this are the transfer articulation agreements that were developed for the departments in the College of Engineering, the departments in the College

of Agricultural Sciences, and the Departments of Mathematics and Nursing of the College of Arts and Sciences.

Recommendations
1. The admissions criteria must be reviewed to decrease the high percentage of incoming students with deficiencies in Mathematics and English. This problem needs to be discussed with the Department of Education, which has been eliminating courses in critical areas such as the Sciences, English, Mathematics, and Spanish. This study must be coordinated by the Academic Senate and the Dean of Academic Affairs.
2. The departments and divisions offering the programs related to basic skills, certificate programs, experiential learning, non-credit offerings, distance learning and contractual relationships must develop and implement their own assessment plan to evaluate their effectiveness in order to make the necessary adjustments.
3. The UPRM *Undergraduate Catalog* needs to include detailed information about the certificate programs offered by UPRM.
4. Additional certificate programs are needed to adjust to current changes in Puerto Rico's needs.
5. More resources should be assigned to the Division of Continuing Education and Professional Studies to attend to the increasing population in UPRM interested in obtaining a teacher's certificate.
6. More resources, such as powerful servers,and better computers, are needed to upgrade our computer facilities to offer courses through distance learning.
7. A systematic evaluative process should be established and monitored for distance learning courses in order to maintain academic quality and programmatic development.
8. The Cooperative Education Program should be promoted among UPRM students to allow them to explore new alternatives and obtain work experience prior to their graduation.
9. The needs assessment for additional contractual relationships such as articulation agreements with other UPR campuses and new agreements with other mainland institutions or foreign institutions should be conducted.

Commendations
1. The Department of Mathematics for developing internet based diagnostic exams and tutorials to allow incoming students to prepare for the diagnostic exam. Also, some professors have proposals approved from the Department of Education to prepare high school Mathematics teachers and help prospective UPRM students.
2. UPRM division and academic departments for establishing certificate programs to provide students with alternatives to obtain better professional experience.
3. The Dean of Academic Affairs for creating an Institute of Educational Development and Learning on Line (acronym in Spanish IDEAL) that organizes seminars for professors interested in offering courses through distance learning.
4. The Division of Continuing Education and Professional Studies for promoting non-credit courses to the community and offering courses to our students to obtain a Teacher's Certification.
5. The UPRM administration for signing new contractual relationships with other UPR campuses and institutions.

Standard 14: Assessment of Student Learning

Background

This section contains a chronology of major events that have had an effect on the development of assessment of student learning outcomes at the UPRM.

Comprehensive Self-Study Report, 1995

The Steering Committee found that individual faculty members, administrative and academic units such as the Offices of the Dean of Academic Affairs and the Dean of Students, and the four colleges have undertaken assessment initiatives. Some of these initiatives include the administration of student, faculty and alumni surveys, analysis of graduation and retention rates; failure rates, and success predictors among others.

1995 Report prepared by the MSCHE Evaluation Team

The outcome assessment initiatives currently under way need to be eventually fully institutionalized in order to measure if mission objectives have been accomplished. On the other hand, good progress has been made to date in making the campus aware of Outcomes Assessment.

The Mission Statement and Outcomes Assessment must be closely related and even though members of the campus community have been exposed to and many understand outcomes assessment, the application of outcomes assessment criteria is still not widespread.

Periodic Review Report 2000

Outcomes assessment plans have not yet been implemented. Some colleges are developing outcomes assessment teams to continue the work of their strategic planning committees and begin the collection of required data.

Response to the Periodic Review Report 2000

The Commission requested a follow-up report by October 1, 2003, documenting (1) development and implementation of a comprehensive institutional strategic plan, and (2) development and implementation of a comprehensive outcomes assessment plan including student learning outcomes.

Follow-up Report 2003

The following actions were taken as a result of the response to the Periodic Review Report 2000.

- February 2002: 25 faculty and 5 staff participate in an assessment institute offered by Penn State's NCTLA in San Juan.
- March-April 2002: Several workshops on outcomes assessment are offered at the College of Arts and Sciences, and in departments of Nursing and Mathematics.
- April 2002: Interim Chancellor Pablo Rodríguez approves and creates the Office of Institutional Research and Planning.
- May 2002: A two-day assessment workshop was offered for UPRM faculty and staff with Penn State's NCTLA speakers.

- June 2002: Former MSCHE Accreditation Coordinator Prof. Marta Colón participates in AAHE Conference in Boston.
- January 2003: Chancellor Jorge I. Vélez Arocho opens the Continuous Improvement Educational Initiative (CIEI) and assigns Dr. Anand Sharma as the director.
- January 2003-July 2003: Assessment plans for institutional effectiveness and student learning assessment are developed by Dr. Banerjee and Dr. Dika, and Prof. González, respectively.
- August 2003: Both assessment plans are approved by the UPRM Administrative Board. Campus-wide implementation of both plans was made effective immediately.

Response to the Follow-up Report 2003

MSCHE requests that the self-study, in preparation for the 2004-2005 visit, document (1) further development and implementation of a comprehensive long-range strategic plan which links long-range planning to decision-making and budgeting processes, and includes timelines, priorities, assignments of responsibilities, and financial implications, and (2) implementation of a written plan for the assessment of institutional effectiveness and student learning and evidence that student learning information is used to improve teaching and learning.

The following actions were taken as a result of the response to the Follow-up Report 2003.
- November 18, 2003: GM-sponsored workshop to launch the institutional assessment plans is offered to deans and department directors.
- November 2003 – present: Informal assistance by MSCHE Steering Team members is offered to departments for the development of student learning assessment plans.
- March 16, 2004: A resolution was approved by the UPRM Academic Senate requiring academic departments to have a student learning assessment plan in place in order for their curricular and program change requests to be considered by the Senate.

Findings
The findings of Task Force 11 resulted from the questionnaires administered to the different academic units and from structured interviews with each department director or representative.

Articulated expectations of student learning outcomes at various levels
1. UPRM-MSCHE Steering Team developed the Institutional Student Learning Outcomes during summer 2003 as part of the Institutional Plan for the Assessment of Student Learning. Special attention was placed in the alignment of student outcomes and the UPRM mission, which is placed on the MSCHE Web site, but was not published in the 2004-2005 UPRM Catalog (http://www.uprm.edu/msa/Outcomes.html).
2. As part of their departmental plan for the Assessment of Student Learning Outcomes, the departments/programs have established their own student learning outcomes consistent with their mission. Most of the departments include in their assessment plans a matrix showing the relationship of their program outcomes and the Institutional Student Learning Outcomes.
3. Departments must publicize their student learning outcomes widely. However, only the College of Business Administration and the College of Engineering have published their

outcomes in the 2004-2005 UPRM Catalog. Only a few departments have them on web pages, brochures, posters and/or handouts.

4. The current accreditation status of the Nursing (NLNAC), Chemistry (ACS), and Engineering (ABET) programs is evidence that the expectations of student learning outcomes are consonant with standards of higher education and standards of various disciplines.

5. At course level, Certification 130 of the Board of Trustees 1999-2000, requires that all syllabi include the course expected learning outcomes and state how these objectives will be measured. The revision of syllabi in all departments/programs has been going on and about 67% of the departments have complied with this certification.

Implemented plan for the assessment of student learning outcomes

1. The UPRM-MSCHE Steering Team developed the Institutional Plan for the Assessment of Student Learning during summer 2003. It was drafted utilizing the pilot assessment plan from the Civil Engineering Department which was developed at the time of ABET's accreditation visit in November 2002.   It was approved by
   - The UPRM Administrative Board on August 28, 2003 (Certification 03-04-180), and
   - The UPRM Academic Senate on September 30, 2003 (Certification 03-43).

   The approval of this new plan shows the commitment of the institution to the assessment process. A copy of the Institutional Plan for the Assessment of Student Learning is available at:
   www.uprm.edu/msa/Reports/Institutional_Student_%20Learning_%20Assessment_Plan.pdf.pdf

2. The purpose of the Institutional Plan is to guide academic departments/programs in the development and implementation of their own assessment plan. Several departments have followed a format similar to that of the institutional assessment plan.

3. The assessment of student learning is primarily course-embedded and department/program-based.

4. Each academic college has initiated the establishment of the infrastructure, resources, and training necessary to institutionalize the assessment processes and to guide and support department/program assessment efforts. For this purpose an assessment coordinator has being appointed in each college, see Table 9, and an assessment committee has been created with representatives of all academic units within the college. The representatives to this committee are the departmental assessment coordinators that, with the departmental assessment team, are responsible for the development and implementation of the assessment plans. Some of the departmental assessment coordinators receive from 1 to 3 credits of release time depending on the working plan or the number of students in the department.

Table 9. College Assessment Coordinators

College	Coordinator	Appointed Date
Agricultural Sciences	Director of the Planning and Budgeting Office	August 2003
Arts and Sciences	Associate Dean for Assessment and Information Systems	July 2003
Engineering	Director of the System for the Evaluation of Education Office	July 2001
Business Administration	Coordinator of the Outcomes Assessment Team	May 2003

5.   Since the approval of the Institutional Plan for the Assessment of Student Learning in September 2003, significant progress has been made in the development and implementation of department/program assessment plans. All academic departments or programs, with the exception of one department in the College of Arts and Sciences, have the assessment plans approved and have them in place for implementation. Table 10 shows the date on which these plans were approved and have been implemented.

Table 10. Implementation Dates of the Student Learning Assessment Plans, and the Number of Students enrolled for the Second Semester 2003-2004

College of Agricultural Sciences

Department/Program	Number of Students	Implementation Date
General Agricultural Sciences	97	September 2004
Agricultural Economics	36	September 2004
Agricultural Education	86	April 2004
Agricultural Engineering	96	October 2004
Agronomy	222	October 2004
Animal Industries	243	October 2004
Crop Protection	29	September 2004
Horticulture	77	September 2004
Food Sciences & Technology*	34	November 2004
Total of students	920	

* Graduate Program Only

College of Arts and Sciences

Department/Program	Number of Students	Implementation Date
Economics	90	January 2004
English	135	In progress
Hispanic Studies	88	September 2004
Humanities	207	October 2004
Physical Education	272	August 2004
Social Sciences	762	September 2004
Biology	1032	January 2004
Chemistry	268	January 2004
Geology	99	September 2004
Marine Sciences*	86	October 2004
Mathematics	283	August 2004
Nursing	190	2002
Physics	206	September 2004
Total of students	3718	

* Graduate Program Only

College of Business Administration

Department/Program	Number of Students	Implementation Date
Business Administration	1368	May 2004

College of Engineering

Department/Program	Number of Students	Implementation Date
Chemical Engineering	644	July 2001
Civil Engineering & Surveying	997	July 2001
Electrical & Computer Engineering	1326	July 2001
General Engineering	-	July 2001
Industrial Engineering	512	July 2001
Mechanical Engineering	724	July 2001
Total of Students	4203	

6. Considering the student learning assessment plans in place for at least one semester, 64% of the student body has been involved in the outcomes assessment process.
7. An institutional process does not exist for the assessment of general education outcomes within the institutional plan for assessing student learning.
8. An Assessment plan for the Division of Continuing Education and Professional Studies (DECEP) is under development.
9. The Office of Graduates Studies sees that all academic and administrative regulations at the graduate level are followed but does not assess academic progress of the students. Most of the assessment plans already in place only include undergraduate programs.
10. The Office of Institutional Research and Planning (OIIP) provides statistics about retention of undergraduate and graduate students.

11. The institution has been providing outcomes assessment training support to the faculty of all academic units through workshops and seminars organized and/or coordinated by the Center for Professional Enrichment (CEP in Spanish).
    - New faculty members are required to attend a three-day orientation at the beginning of every academic year, which includes at least one topic on teaching techniques and assessment.
    - The College of Arts and Sciences sponsored a series of five workshops on student learning assessment during the second semester of 2003-2004. An additional workshop on the development of departmental student learning assessment plans was offered during summer 2004.
    - The College of Business Administration sponsored three workshops on assessment of student learning during the 2003-2004 academic year.
    - The SEED Office of the College of Engineering played a key role in organizing the campus-wide GM sponsored assessment workshops on November 18, 2003 and May 7, 2004.

Evidence that student learning assessment information is used to improve student learning

1. The Institutional Plan for the Assessment of Student Learning provided a list of evidentiary documentation that can prove that the process is in place and leads to the continuous improvement of the educational programs. Some of the most commonly used means by the departments/programs are:
    - Course-embedded measures such as exams, quizzes, projects, and students presentations, among others
    - Graduating students, employers and alumni surveys
    - National examination results
    - Meeting with advisory boards and interviews with professionals in the field
    - Grade trends and retention rates
2. While significant progress in developing student learning assessment plans and data gathering have been made, at this early stage in the process only some academic departments have begun to use results to improve their programs from implemented plans. Some of these changes are:
a) Biology
    - Syllabus with objectives
    - General Biology course modification
    - CARE laboratories and courses modified and innovated
    - Included ethics, communication, computers and teamwork into curriculum
    - Curriculum revision
    - Course revision
b) Civil Engineering
    - Curriculum revision to reduce the total credit hours required for graduation
    - Course revision, INCI 4950 - Capstone Course
    - Improvement in safety education in the laboratory-based courses

c)   Nursing
   - Development of new courses as ENFE 3095 and ENFE 5005
   - The establishment of Skills Laboratory
   - The establishment of the Interactive Learning Classroom
   - The creation of Review course for the Professional Licensure Examination
d)   Chemistry
   - Curriculum revision
   - Change pre-requisites of the General Chemistry course
   - Changes in course offerings

Student learning assessment information made available to main constituencies.
1.   In general, department/programs are expected to prepare reports on the findings of the assessment process and distribute them within their corresponding college, faculty, and students.
2.   The Biology Department has several Student Learning Assessment Reports that include:
   - Departmental Assessment Report (in progress)
   - PROMISE Annual Assessment Reports (2000, 2001, 2002 and 2003), http://www.uprm.edu/promise/reports/
   - Department Assessment TEAM handout and website
   - MARC/Sloan Assessment Reports
3.   Engineering Programs have their respective Self-Study Reports submitted to ABET on 2002 for re-accreditation

Recommendations
1.   The general responsibilities of the Office of Continuous Improvement Educational Initiative in terms of institutional assessment have to be clearly stated and should be adopted as a permanent part of the institutional structure to ensure that the assessment of the student learning outcomes and continuous improvement is institutionalized.
2.   The Office of Continuous Improvement Educational Initiative should be staffed by a full-time coordinator with experience and training in evaluation and assessment, and at least a full-time student learning assessment specialist to provide technical assistance on assessment development and implementation.
3.   A permanent Institutional Committee on the Assessment of Student Learning should be created to be led by the CIEI Coordinator, and constituted with a representative from each College Assessment Committee and a representative from the Office of the Dean of Academic Affairs.
4.   Each academic department must include a section on academic outcomes assessment in each year's annual report. A standardized format for reporting and documenting student learning outcomes must be established and implemented.
5.   Student learning outcomes at all appropriate levels must be published by all possible means: UPRM Catalog, web pages, brochures, posters, handouts, newsletters, and student orientations.
6.   Outcomes assessment training to the faculty and staff of all academic units should be continued to emphasize the importance of assessment via workshops and seminars

organized and coordinated by the CEP. Travel to assessment conferences must also be continued.

7. Guidance and support need to be continued by each academic college to assure that all departments/programs develop and implement their student learning assessment plans.

8. The assessment of student learning has to be expanded to include all graduate programs.

9. The person responsible for the implementation of the student learning assessment plan and the analysis of the assessment data at the departmental level should receive release time depending on the number of students in the department.

10. The Institutional Assessment Plan must be revised to make provisions for the inclusion of the assessment of the general education component.

LIST OF DOCUMENTS & REPORTS ACCESSED

- Designs for Excellence, MSCHE, Eighth Edition, 2002
- Characteristics of Excellence in Higher Education, MSCHE, 2002
- Student Learning Assessment – Options and Resources, MSCHE, 2003
- ABET's Engineering Criteria 2000
- Comprehensive Self-Study Report, UPRM, March 1995
- Report on the Implementation of Total Quality, March 3, 1999
- UPRM Periodic Review Report 2000 to MSCHE, June 2001
- Program Self-Study Reports (Electrical Engineering, Computer Engineering, Industrial Engineering, Mechanical Engineering, Civil Engineering, and Chemical Engineering) for ABET Accreditation, June 2002
- Final Self-Study Design, June 23, 2003
- UPRM Follow-up Report to MSCHE, September 29, 2003
- Plan for the Assessment of Overall Institutional Effectiveness, August 28, 2003
- Institutional Plan for the Assessment of Student Learning, August 28, 2003
- MOU between MSCHE and PRCHE, December 2003
- Institutional Profile 2003-2004, April 28, 2004
- Revised UPRM Strategic Plan, September 21, 2004
- Comprehensive self-study reports of Task Forces 1-11