

**Monitoring Report to the  
Middle States Commission on Higher Education**

**From**

**UNIVERSITY OF PUERTO RICO-MAYAGÜEZ  
Mayagüez, PR 00681**

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**March 28, 2007**

**Subject of the Follow-up Report:**

- 1. Development and implementation of a comprehensive institutional strategic plan which links long-range planning to decision-making and budgeting processes*
- 2. Progress made in the implementation of comprehensive institutional assessment and student learning assessment plans*

**Date of the Evaluation Team's Visit: March 6-9, 2005  
Chair of the Evaluation Team: Dr. Carlos Hernández**

## **ISSUES OR TOPICS COVERED:**

This report covers the progress made at the University of Puerto Rico-Mayagüez (UPRM) on two fronts namely: (a) the changed practice of linking the budgetary assignment for 2006-07 with UPRM's strategic plan, and (b) the formal adoption of a culture of continuous improvement via assessment.

In April 2006, the UPRM Budget Office implemented a web-based system to calculate budget amounts corresponding to estimated effort toward the institution's strategic directions. To develop the budget request for 2006-07, each department director completed the exercise of estimating effort and resources to arrive at overall amounts and percentages by critical area and strategy of the strategic plan. The Office of Continuous Improvement and Assessment (OMCA in Spanish) and the Office of Institutional Research and Planning (OIIIP in Spanish) have developed a proposed list of performance indicators to improve upon this process of budgetary allocations. The institution will begin formal monitoring of these indicators in 2007-08.

OMCA was formally established by the University Board on September 8, 2005 as a unit to oversee and assist in the development and implementation of assessment across the campus (<http://www.uprm.edu/omca>). The unit was built upon the successes of earlier initiatives, such as the System for the Evaluation of Education (SEED) in the College of Engineering and institutional Continuous Improvement Educational Initiative (CIEI). The commitment of institutional resources to create the office and employ an assessment professional signify to the campus community a change in expectations, along with a willingness to provide the necessary support to implement the desired changes. The attention to the administrative functions of the institution was met with much enthusiasm and a sentiment that this sector of the university would finally receive needed attention and resources. Without these structures, the continuous improvement processes that have come to fruition during the past year and a half would not have been sustainable.

OMCA has actively coordinated the institution-wide assessment process to facilitate data-based decision making and continuous improvement. Templates for assessment plans and reports, as well as feedback rubrics for these plans and reports, have been created to ensure the alignment of these activities with the institutional mission and values. During the 2005-06 academic year and the first semester of 2006-07, academic programs and administrative units selected and focused on single projects instead of attempting to address multiple areas for improvement as was recommended in the post-visit MSCHE report. As of March 2007, every academic department has reported on at least one assessment project, and 89% of administrative units have implemented assessment projects focused on the improvement of services and administrative processes. The reviews of these reports suggest the growing acceptance of the assessment culture, particularly in certain academic colleges and administrative divisions. Finally, the recent development and adoption of the first institutional General Education Assessment Plan signifies an institutional commitment to bring together college-level efforts to provide a greater focus on the achievement of the institutional student learning outcomes for all students.

## **INSTITUTIONAL CONTEXT/UPDATE:**

### **Institutional Leadership**

The University of Puerto Rico at Mayagüez is focused on a comprehensive process to enhance a strategic and operational approach to academic and administrative management. During the 2005-06 academic year, important institutional challenges took place to reach this important objective. The Administrative Board, the Academic Senate and the UPRM academic colleges worked very hard to achieve the proposed milestones for the implementation of the specific actions of the strategic plan for 2005-06.

The Board of Trustees of the University of Puerto Rico (UPR) approved the strategic plan “Diez para la Década” for the UPR System. The President of UPR, Antonio García-Padilla, refers to the strategic plan as a pact between the UPR stakeholders: “Ten for the Decade is a guide and a pact of principles and actions that identifies institutional life parameters for the University of Puerto Rico.”

The alignment of our strategic plan with the strategic plan of the UPR system and the development of the actions to implement our strategic plan have provided our institution with a specific context and framework which guide and focus our institutional leadership towards advancing our mission and vision. UPRM’s institutional leadership has focused on ten (10) strategic areas:

- Sustained ties to the student body
- Competitive research
- Technological modernization
- Dedication to the integration of the university into the world at large
- Administrative and managerial optimization
- Academic culture of modernization, experimentation, and renewal
- Culture of institutional assessment and evaluation
- Leadership in community investment and cultural initiatives
- Efficiency and beauty in both natural and built spaces
- Strengthened institutional identity

The Chancellor’s 2006 annual report to the Academic Senate summarized the institutional actions taken to reach the proposed milestones. In his message he emphasized the values that the community has embraced as part of the process to develop this new cultural fabric at UPRM.

- Stakeholder satisfaction
- Institutional pride and commitment
- Solidarity and service
- Responsibility and a sense of urgency
- Creativity and innovation
- Integrity
- Participation and team work
- Collaboration and cooperation
- Institutional diversity, autonomy, and unity
- Appreciation for diversity
- Excellence

## **Curriculum**

As of August 2004, the Academic Senate requires the inclusion of student learning assessment plans for any new courses or programs, and for approval of any program revisions (Certification No: 04-12). The major changes in curriculum in recent years at UPRM have taken place primarily at the graduate level. Two (2) new doctoral (Ph.D.) programs in Electrical and Mechanical Engineering have been proposed by UPRM and are at the University Board level pending their approval. A total of six (6) new master’s degree programs have been proposed; three (3) from the College of Arts and Sciences, two (2) from the College of Engineering, and one (1) from the College of Agricultural Sciences. These programs are at different stages of approval.

At the undergraduate level, four (4) new bachelor’s degree programs have been proposed, which presently are at different levels of approval. Two (2) of these are from the College of Arts and Sciences, one (1) from the College of Agricultural Sciences and one (1) from the College of Engineering. Several curricular revisions at the undergraduate level have also been approved. The only major revision was for Mechanical Engineering bachelor’s degree and it will be implemented starting in August 2007. Several minor program revisions have also been approved: seven (7) in programs in the College of Arts and Sciences, four (4) in the College of Engineering and one (1) in the College of Business Administration. Eight (8) curricular sequences have been approved by the UPRM Academic Senate, of which six (6) have

been submitted to the UPR Central Administration for code assignment, while the other two (2) are scheduled to be submitted shortly. Curricular sequences are an innovative way to provide students with options to select a curricular track of their interest that is not necessarily related to their selected major. Recognition of completion of the sequence is provided in the student's official UPRM transcript. Three (3) additional new sequences are pending approval by the Academic Senate, and two (2) sequences are currently undergoing corrections by the Office of the Dean of Academic Affairs prior to their submission to the Academic Senate.

All academic programs subject to accreditation are working towards this goal or have already been accredited. Presently all the undergraduate programs in engineering have been accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET), and the program in nursing has been accredited by the National League for Nursing Accrediting Commission (NLNAC). Among the programs that are in the process of seeking accreditations are two programs in education (by the National Council for Accreditation of Teacher Education - NCATE), and six programs in business (by the Association to Advance Collegiate Schools of Business - AACSB). A seventh program in office administration, housed in the College of Business Administration, will seek accreditation from the Association of Collegiate Business Schools and Programs (ACBSP). In addition, the computing information systems program which is also part of this college will seek accreditation from the Computing Accreditation Commission (CAC) of ABET in the near future. The computer science program in the Department of Mathematics is also currently working to seek accreditation from CAC.

## Enrollment

The admission trend for first year students at the University of Puerto Rico-Mayagüez (UPRM) has remained practically steady, with only a slight increase from 2,204 to 2,541 students from the 2002-03 to the 2006-07 academic years (see Figure 1). A peak in admissions occurred in the academic year 2003-04. Students registering as first year students have increased steadily through these academic years from 2,073 to 2,243. On average, 89% of admitted students register for their first year. The number of spaces available for first year students is lower than the number of applicants; acceptance rate is about 70%. Similar graphs reflecting admission trends for the four academic colleges (Agricultural Sciences, Arts & Sciences, Business Administration, and Engineering) are available from the Office of Institutional Research & Planning (OIIP) and can be generated using the dynamic graphics function on the OIIP web page ([http://oiip.uprm.edu/charts\\_menu.php](http://oiip.uprm.edu/charts_menu.php)).

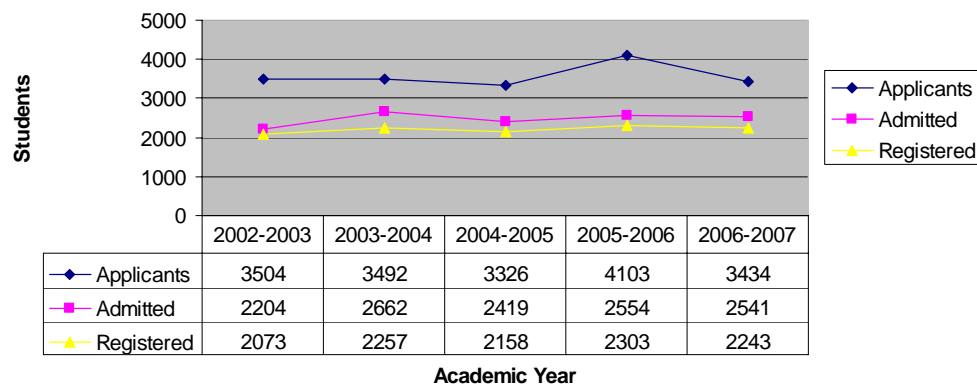


Figure 1: UPRM Admission Trends, 2002-03 to 2006-07

## **Institutional Financial Health**

The University of Puerto Rico-Mayagüez has faced important institutional financial challenges particularly related to increases in the costs related to utilities and technology. Within this context, our campus is developing several very important permanent facilities programs in decades in coordination with the Central Administration and the government of Puerto Rico. Some examples of these efforts, with anticipated completion dates, are:

- Biotechnology Process Plant (January 2008)
- Center for Innovation and Research in Agricultural Products (January 2008)
- Sports complex with three new swimming pools, ten tennis courts and four racquetball courts (April 2009)
- Art museum - MUSA (December 2007)
- Renovation of former Business Administration building to house 150 faculty offices (December 2008)
- Renovation of former Biology building to house several administrative offices such as the Institutional Research and Planning, Registrar, the Dean of the Arts and Sciences, Center for Professional Enhancement, and Continuous Improvement and Assessment (December 2008)

Maintenance of existing infrastructure was a key component of our financial plan for 2006-07. Important initiatives were taken to paint and repair most of the large buildings on campus. Another component of our financial plan is to maintain or increase the number of persons studying Ph.D.'s in top institutions outside of Puerto Rico. Currently we have 52 persons studying abroad supported by UPRM. This represents an important investment in our faculty development. We continue to face financial challenges like any other university, but we are confident that continued increases in external funding for research and development -- a 43% increase between 2002-03 and 2005-06 (as reported by the UPRM Research & Development Center, 2006) -- will help us achieve our goals and objectives.

### **PROGRESS TO DATE:**

*(1) Development and implementation of a comprehensive institutional strategic plan which links long-range planning to decision-making and budgeting processes*

#### **Introduction**

The University of Puerto Rico at Mayagüez (UPRM) developed a strategic plan in 1996. Besides defining the mission and vision of our institution, eight (8) main goals with specific objectives were recognized. Being fully aware that this plan had to be linked with the budgetary process, UPRM's budget request, submitted to the Central Administration of the University of Puerto Rico (UPR) for fiscal years 1997-98 through 2002-03, was based on this first strategic plan. The strategic plan was revised in 2004; and it now included eight (8) critical areas which are further sub-divided into 41 strategies and 178 strategic directions. For three subsequent fiscal years; 2003-04, 2004-05 and 2005-06; the Central Administration assigned a recurrent budget based on the 2002-03 allocation, plus any increases in salaries and benefits as stipulated by law.

#### **Initiation of a Process to Link Planning and Budgeting Processes - SAP<sup>3</sup>**

In 1999, the UPRM Budget Office designed and developed the *Sistema Automatizado de Planificación y Petición Presupuestaria* or SAP<sup>3</sup>, a web-based system that allows department directors to estimate and distribute their budgets based on estimated effort and expenditures toward elements of the strategic plan.

This system was redesigned in 2004 to reflect the new strategic plan. SAP<sup>3</sup> provides the user with a means to estimate *percentage of personnel effort, materials, and other expenditures* (e.g., travel) among the strategic directions that the department proposes to emphasize. Based on the estimate of effort and resources, the system calculates the budget amount corresponding to each strategic direction. In response to MSCHE's recommendations after the re-accreditation visit in March 2005, UPRM re-implemented SAP<sup>3</sup> in April 2006 to link the planning and budgeting processes for fiscal year 2006-07. Table 1 displays the average estimated effort (personnel and other resources) by critical areas and strategies, along with the corresponding budget amount requested based on estimated effort. The critical areas that were perceived to receive the most emphasis for 2006-07 were Leadership (30%), followed by Curriculum (19%) and Human Resources (15%). When the consolidated budget of UPRM, including the Agricultural Experimental Station (EEA) and the Agricultural Extension Service (SEA), is considered, the distribution follows the same tendency. Effort and budgetary breakdowns for the secondary levels (strategies) under each of the eight (8) critical areas have also been provided.

It is important to note that approximately 88% of the overall budget distribution is for salaries and benefits, while only 12% is for other expenditures (e.g., materials, travel, etc.). The distribution can change slightly depending on the critical area and on the percentage of effort as estimated by department directors. For the critical areas of Students, Curriculum, Research, and Administration, the estimated "other costs" constitute between 7 to 10% of the budget. These costs constitute a significantly higher percentage of the budget for Infrastructure (22%) and Leadership (17%). Estimated other costs for Community Service and Outreach (3%) and Human Resources (5%) make up a significantly lower percentage of their budgets. These distributions follow the same pattern for the consolidated budget which includes EEA and SEA.

### **Proposed Performance Indicators**

In 2005, the MSCHE evaluation team recommended that UPRM make budgetary decisions at the institutional level, including reallocation, based on relevant *performance indicators* rather than on historical data. Recently, as part of the revision of the institutional strategic and assessment plans, the offices of OIIP and OMCA met to compile suggested indicators from the Budget Office with indicators in development. An initial list of indicators, by strategic area, is shown in Table 2. This list will be reviewed periodically to determine the data sources and feasibility of each of these indicators. It is anticipated that a list of indicators will be formalized by the end of the 2006-07 academic year.

### **Next Steps in Implementation**

The exercise to designate estimated effort and resources towards specific strategies and strategic directions revealed a significant amount of overlap and redundancy in the strategic plan. For example, there are two nearly identical strategies related to teaching and learning under Leadership (Become leaders within the teaching-learning process) and under Curriculum (Improve and innovate teaching-learning processes). This redundancy implies that the 2006-07 exercise may not accurately reflect the distribution of effort and budget among the eight critical areas. To eliminate redundancy, the Coordinator of Strategic Planning has reviewed the original strategies and developed a consolidated list of 23 strategies. The list of strategies has been presented to the institutional administration, and presentations to the units in the major divisions (seven deans' offices) are in progress. SAP<sup>3</sup> will be revised to facilitate the budget request for 2007-08. In the first semester of 2007-08, units will compare budget requests with actual expenditures by critical area and strategy. The Budget Office will coordinate the identification of the fiscal year 2006-07 expended operational budget with the strategic plan across the entire institution. These data will be used to make comparisons for future expenditures. The UPRM administration will move ahead with the adoption of performance indicators by first semester of 2007-08, and begin evaluating the indicators at regular intervals for use in the budget allocation and reallocation process.

**TABLE 1: ESTIMATED EFFORT AND CORRESPONDING BUDGET BY CRITICAL AREA, FY 2006-07 (UPR General Fund)**

Critical Area	UPRM Campus only		UPRM Campus, EEA and SEA	
	% Effort	Amount	% Effort	Amount
<b>I. Leadership</b>	<b>30.00%</b>	<b>\$44,892,544.77</b>	<b>27.25%</b>	<b>\$50,839,579.53</b>
Become leaders within the teaching-learning process.	35.22%	15,813,179.54	42.70%	21,707,085.95
Internationalize the institution.	3.47%	1,557,546.01	3.06%	1,557,546.01
Implement a strong planning process.	5.04%	2,262,696.10	4.54%	2,310,194.68
Develop permanent assessment structures to support decision-making processes.	8.95%	4,015,676.00	7.91%	4,021,305.77
Develop a continuous improvement process.	8.21%	3,685,017.74	7.25%	3,685,017.74
Integrate both planning and budgeting processes.	36.19%	16,244,903.92	31.95%	16,244,903.92
Promote decentralized management to foster shared leadership.	0.10%	45,376.80	0.09%	45,376.80
Make UPRM'S presence more evident among local, national and international communities.	2.82%	1,268,148.67	2.49%	1,268,148.67
<b>II. Students/Alumni</b>	<b>11.23%</b>	<b>16,798,333.96</b>	<b>9.00%</b>	<b>16,798,333.96</b>
Provide outstanding student support services	55.44%	9,313,783.63	55.44%	9,313,783.63
Form motivated students who are committed to excellence and social responsibility.	5.98%	1,004,132.50	5.98%	1,004,132.50
Fully develop student potential.	23.71%	3,983,663.51	23.71%	3,983,663.51
Bring about student involvement in UPRM activities and fully develop leadership skills.	0.99%	166,406.76	0.99%	166,406.76
Attract and register the best first-year students.	1.69%	284,627.75	1.69%	284,627.75
Retain students until they complete their degrees.	11.04%	1,854,514.05	11.04%	1,854,514.05
Strengthen bonds with UPRM alumni.	1.14%	191,205.77	1.14%	191,205.77
<b>III. Curriculum, learning, and teaching</b>	<b>19.19%</b>	<b>28,711,980.22</b>	<b>22.91%</b>	<b>42,729,491.09</b>
Offer updated academic offerings.	40.56%	11,644,794.77	27.25%	11,644,794.77
Improve and innovate teaching - learning processes.	36.55%	10,492,944.08	24.56%	10,492,944.08
Increase the number of excellent academic and professional graduate offerings.	5.41%	1,552,520.22	3.63%	1,552,520.22
Promote entrepreneurial spirit and initiatives among all students.	0.15%	42,739.46	0.10%	42,739.46
Improve continuing education offerings.	17.34%	4,978,981.69	44.46%	18,996,492.56

**TABLE 1: ESTIMATED EFFORT AND CORRESPONDING BUDGET BY CRITICAL AREA, FY 2006-07 (UPR General Fund)**

Critical Area	UPRM Campus only		UPRM Campus, EEA and SEA	
	% Effort	Amount (\$)	% Effort	Amount (\$)
<b>IV. Research, creative action, and graduate studies</b>	<b>2.92%</b>	<b>4,367,681.33</b>	<b>9.50%</b>	<b>17,716,460.03</b>
Achieve greater research endeavors.	36.80%	1,607,216.58	9.07%	1,607,216.58
Develop research funding lines in support of Puerto Rico's technological, economic and social development.	30.32%	1,324,192.71	15.19%	2,691,646.51
Establish collaborative efforts within the UPRM system and with other universities in and outside Puerto Rico.	14.85%	648,751.81	71.29%	12,630,076.71
Strengthen efforts in the search for external funding sources.	18.03%	787,520.23	4.45%	787,520.23
<b>V. Community service and outreach</b>	<b>1.89%</b>	<b>2,832,693.18</b>	<b>1.53%</b>	<b>2,855,212.26</b>
Broaden publication and promotion of research, creative, and service activities.	0.66%	18,574.07	1.04%	29,833.61
Promote close collaborative efforts and broader community services.	82.39%	2,333,947.55	81.94%	2,339,577.32
Promote community and institutional initiatives leading to community development.	16.95%	480,171.56	17.01%	485,801.33
<b>VI. Human resources</b>	<b>15.12%</b>	<b>22,628,553.87</b>	<b>12.44%</b>	<b>23,207,184.54</b>
Develop a college atmosphere which fosters good communication and improves cultural awareness	54.57%	12,348,116.13	53.23%	12,353,745.91
Attract and retain the best human talent.	4.56%	1,032,569.90	5.66%	1,313,440.58
Educate and train employees to keep them updated on pertinent work-related knowledge and skills.	24.03%	5,437,051.93	23.48%	5,448,311.47
Strengthen employee diversification and cross-training.	9.81%	2,220,745.05	10.17%	2,361,180.39
Develop objective evaluation systems for the assessment of human resources.	7.03%	1,590,070.86	7.46%	1,730,506.20
<b>VII. Effective and efficient administration</b>	<b>5.52%</b>	<b>8,255,710.20</b>	<b>5.84%</b>	<b>10,885,876.42</b>
Self-evaluate, criticize, and learn from our own experience.	5.49%	453,510.73	4.17%	453,510.73
Establish a university which is operationally agile, efficient, and capable of being audited.	20.99%	1,733,025.27	15.92%	1,733,025.27
Promote the establishment of technologies to facilitate all processes.	16.05%	1,324,966.38	12.17%	1,324,966.38
Continually evaluate and improve faculty support systems.	1.65%	136,206.12	13.84%	1,506,843.86
Re-design core processes.	55.82%	4,608,001.71	53.90%	5,867,530.19
<b>VIII. Infrastructure and heritage</b>	<b>14.13%</b>	<b>21,151,164.67</b>	<b>11.53%</b>	<b>21,512,735.17</b>
Review the master infrastructure and physical facilities plan.	63.71%	13,475,712.57	62.64%	13,475,712.57
Update the continuous permanent improvement program.	0.01%	2,793.12	0.01%	2,793.12
Update educational technology and information systems.	36.28%	7,672,658.77	37.35%	8,034,229.46
<b>Total</b>	<b>100.00%</b>	<b>\$149,638,662.20</b>	<b>100.00%</b>	<b>\$186,544,873.00</b>

**TABLE 2. PROPOSED PERFORMANCE INDICATORS BY CRITICAL AREA**

Strategic Area	Indicator	
Leadership	<ul style="list-style-type: none"> <li>• Turnaround time for curricular revision</li> </ul>	<ul style="list-style-type: none"> <li>• Number of strategic alliances with external agencies</li> </ul>
Students/Alumni	<ul style="list-style-type: none"> <li>• Quality of incoming students (average IGS and CEEB scores)</li> <li>• Acceptance rate</li> <li>• Time to degree</li> <li>• FTE enrollment</li> <li>• Students served</li> <li>• Retention rates</li> </ul>	<ul style="list-style-type: none"> <li>• Withdrawal and failure rates in first year “gatekeeper” courses</li> <li>• Graduation rate</li> <li>• GPA</li> <li>• Acceptance to graduate school</li> <li>• Alumni donations (\$)</li> <li>• Number of alumni enrolled in alumni registry</li> </ul>
Curriculum, Teaching, Learning	<ul style="list-style-type: none"> <li>• New programs</li> <li>• Curricular changes</li> <li>• Continuing education revenue in academic/professional areas</li> </ul>	<ul style="list-style-type: none"> <li>• Student rating of professors</li> <li>• Average teaching load</li> </ul>
Research & Graduate Studies	<ul style="list-style-type: none"> <li>• External funds (\$)</li> <li>• Cost of release time per publication</li> <li>• Refereed publications</li> </ul>	<ul style="list-style-type: none"> <li>• Number of graduate students</li> <li>• Applied research in support of PR</li> </ul>
Community Service & Outreach	<ul style="list-style-type: none"> <li>• Collaborative efforts focused on community service and development</li> </ul>	
Human Resources	<ul style="list-style-type: none"> <li>• Continuing education and training hours</li> <li>• Number of temporary employees</li> <li>• Recruitment versus identified needs</li> </ul>	<ul style="list-style-type: none"> <li>• Employee retention by permanence status</li> <li>• Employee evaluation</li> </ul>
Administration	<ul style="list-style-type: none"> <li>• Cost of administrative release time and extra compensation</li> <li>• Turnaround time for core processes</li> </ul>	<ul style="list-style-type: none"> <li>• Percent of core processes improved</li> </ul>
Infrastructure & Heritage	<ul style="list-style-type: none"> <li>• Infrastructure and physical facilities (master plan vs. actual)</li> </ul>	<ul style="list-style-type: none"> <li>• Investment in information technology (IT) and infrastructure (IS)</li> </ul>

***(2) Progress made in the implementation of comprehensive institutional assessment and student learning assessment plans***

**Background and Summary**

*Background*

In November 2001, UPRM received notice of the acceptance of its Periodic Review Report (PRR) to the MSCHE. In the corresponding letter, the Commission requested a follow-up report by October 2003 to document the development and implementation of a comprehensive outcomes assessment plan for the institution. The UPRM *Plan for the Assessment of Overall Institutional Effectiveness* and the *Institutional Plan for the Assessment of Student Learning* were developed in 2003 by the UPRM-MSCHE Steering Team in response to this request. The institutional effectiveness assessment plan promotes a continuous improvement process grounded in the goals of the institution as expressed through the institutional strategic plan. The student learning assessment plan specifies an approach for assessment of student learning outcomes at the department/program level.

The results of the MSCHE self-study, compiled at the end of 2004, revealed differing levels of implementation of the institutional assessment plans. At that time, 44% of the administrative offices indicated that they were not aware of their effectiveness in providing services, and 60% did not have an approved assessment plan in place. In the academic units, more formalized processes were in place in most departments. Over half of the academic departments had developed student learning outcomes, and by the time of the self-study visit, all 29 departments and programs had developed assessment plans. While the engineering programs had been regularly reporting assessment results as part of ABET accreditation efforts, other departments; e.g., agricultural education, biology, business administration, chemistry, economics, geology, nursing, psychology, sociology; were reporting initial findings from assessment efforts.

In June 2005, MSCHE reaffirmed the accreditation of UPRM, but requested the submission of a monitoring report by April 1, 2007 to document the implementation of institutional strategic and assessment plans. The report from the visiting MSCHE evaluation team provided five specific recommendations for assessment implementation:

1. “The team recommends that UPRM identify specific aspirations and goals for each division and unit based on what is most important to that area in light of institutional mission.” (MSCHE, 2005, p. 20)
2. “The team recommends that, in order to sustain the continuous improvement effort into the future and ensure its success, the institution coordinate and formalize the roles of OIIP, CIEI, the Budget Office, the Registrar’s Office, and other related offices. It will be important for the Chancellor to sanction and support the organization of these offices in a meaningful way.” (MSCHE, 2005, p. 20)
3. “The team recommends that the institution act to ensure that each program begins the process of implementing its comprehensive learning plan no later than fall 2005. Each program should complete at least one significant assessment project during the next academic year on a topic of importance to that program” (MSCHE, 2005, p. 20)
4. “The team recommends that UPRM establish a group or committee with formal responsibility for coordinating the ongoing, disciplinary assessment efforts of the colleges and providing the Chancellor with an annual report of activities across the campus.” (MSCHE, 2005, p.20)
5. “The team recommends that the institution review the learning goals for general education and develop a formal assessment plan that specifies an ongoing approach to studying these important goals. Responsibility for this project needs to be assigned and a schedule developed.” (MSCHE, 2005, p. 20)

### *Summary of Implementation Progress*

UPRM has taken significant steps to address the recommendations put forth by MSCHE, thus demonstrating progress in the implementation of continuous improvement campus-wide.

Recommendations 2 and 4 have been addressed through the creation of the Office of Continuous Improvement and Assessment (OMCA-Oficina de Mejoramiento Continuo y Avalúo) by the UPRM Administrative Board in September 2005. This action effectively formalized the two-year Continuous Improvement Educational Initiative (CIEI) (2003 to 2005). OMCA is staffed by a director and a full-time secretary, who are aided by the support of two appointed steering teams (academic and administrative) and a select group of advisors. Team members were chosen on the basis of past performance in institutional and engineering accreditation efforts, while ensuring that all academic colleges and administrative units were well represented. In April 2006, the office contracted an assessment specialist on a full-time, temporary basis to ensure the office a greater ability in meeting its stated responsibilities. Additionally, OMCA collaborates closely with the Office of Institutional Research and Planning (OIIP-Oficina de Investigación Institucional y Planificación) to coordinate the strategic planning and continuous improvement processes.

To implement its institutional assessment plans (Recommendations 1 and 3) UPRM has adopted the “assessment project” approach suggested by the MSCHE evaluation team. Both administrative and academic units are required to submit annual reports to OMCA describing at least one assessment cycle completed during the academic year. By the end of March 2006, each administrative unit (115 total) had developed an assessment plan, including the identification of opportunities for improvement based on

existing information. One year later (March 2007), each unit has completed or is working on an assessment project aligned to the institutional mission and to its own responsibilities and services. By November 2006, all academic departments and programs (29) had submitted a report on assessment projects conducted to improve student learning. In May 2007, all units will submit reports for the 2006-07 academic year, including three (3) programs under the Office of Dean of Academic Affairs which had not previously participated in the assessment process - Air Force ROTC, Army ROTC, and the teacher preparation program for secondary education (PPMES).

Recommendation 5, which specifies the development of a general education (GE) assessment plan, has also been addressed by UPRM. The Office of the Dean of Academic Affairs assigned OMCA to coordinate a representative task force to develop the GE assessment plan in October 2006. The task force included representation from all four academic colleges and the university library. In February 2007, the task force submitted its plan to OMCA, which was subsequently reviewed and accepted by the OMCA Academic Steering Team as an annex to the existing student learning assessment plan.

In addition to these implementation efforts, OMCA staff presented two (2) refereed papers and made three (3) invited presentations at national and international conferences about the continuous improvement efforts on our campus.

To evidence the progress on the implementation of each of the two UPRM institutional assessment plans, this report will provide details on the major events of the implementation process, as well as data related to the participation and performance of units in the assessment planning and reporting, including details about completed assessment projects.

## **Implementation of UPRM Plan for the Assessment of Institutional Effectiveness**

### *Implementation Timeline*

The following timeline chronicles the major steps undertaken by UPRM since the receipt of the 2005 MSCHE evaluation team report in June 2005, in order to implement the institutional assessment plan.

September 2005	Office of Continuous Improvement and Assessment (OMCA) created by the UPRM Administrative Board
September 2005	OMCA Administrative Steering Team (ADST) formed
January-February 2006	Template for unit-level administrative assessment plans developed by OMCA ADST
March 2006	Workshops on continuous improvement philosophy and administrative assessment planning offered to the offices of the Dean of Administration
March 2, 2006	Institution-wide administrative assessment workshop delivered to 151 participants
March 31, 2006	Due date to submit administrative assessment plans to OMCA for all administrative offices, including academic units (115 total)
May – June 2006	Rubric to evaluate administrative assessment plans developed by OMCA staff
July – August 2006	All administrative assessment plans evaluated in three categories – mission, responsibilities/services, and assessment methods – by OMCA ADST members and advisors
August 2006	Performance tabulated for each college and dean’s office to determine

	opportunities for improvement in the institutional continuous improvement and assessment process ( <a href="http://www.uprm.edu/omca/Reports/PDF/final.pdf">http://www.uprm.edu/omca/Reports/PDF/final.pdf</a> )
September 11-15, 2006	OMCA director and assessment specialist and one member of the ADST participated in the Iowa Recognition for Performance Excellence (IRPE) examiner training of the Iowa Quality Council (IOWAQC)
September–October 2006	Presentations made to each college and dean’s office to explain the feedback process and deliver results of the evaluation
October 2006 – present	Consultations provided to individual units on the implementation of assessment plans
October 2006	Workshops on action planning delivered to the offices of the Dean of Administration and the Research & Development Center
November 2006	Administrative assessment plan template and rubric revised based on observations during the 2005-06 feedback process
November 2-3, 2006	OMCA director and assessment specialist participated in American Society on Quality (ASQ) Baldrige in Higher Education workshop
December 2006	Meeting conducted with representatives from all academic colleges and academic and student affairs offices to discuss administrative issues common to academic units; based on results from 2005 UPRM student surveys and 2005 NSSE
December 2006 – present	Ongoing meetings conducted with the UPRM Strategic Planning Coordinator and OIIP personnel to align the strategic planning and assessment reporting processes
December 6, 2006	Office of the Dean of Students’ Assessment Committee presented its mission, vision, and assessment efforts to staff members
February 2007	Preliminary set of strategic indicators developed to assess institutional progress toward strategic objectives by OMCA and OIIP personnel
March 1, 2007	Due date to submit administrative assessment reports to OMCA for all administrative offices of non-academic units
March 2-15, 2007	All administrative assessment plans evaluated in four categories – mission, responsibilities/services, assessment methods, and reporting and use of results – by OMCA ADST members and advisors
April 2007	<i>Plan for the Assessment of Institutional Effectiveness</i> to be revised to reflect chosen institutional indicators and proposed methods to identify institutional improvement priorities
April-May 2007	Presentations to be made to each dean’s office to deliver results of the 2007 evaluation, discuss progress made since 2006, and design appropriate professional development opportunities

*Development of a Standardized Administrative Assessment Process*

Based on the results of surveys for the CIEI efforts in 2004-05 which revealed that most administrative and service units lacked assessment plans, the ADST designed an assessment plan template for all administrative and service units. The template was designed to simplify the process for units that had no experience in the development of assessment plans. The completed assessment plans also served as their

first assessment reports to identify strengths and opportunities for improvement based on assessment results, as well as concrete steps to address needs for improvement. Members of the ADST provided institutional seminars and training sessions on how to complete and implement the first assessment plans. Plans were submitted at the end of March 2006.

With a formidable stack of 115 administrative assessment plans in its possession by April 2006, the OMCA staff recognized the need to provide timely feedback to these units on their plans. Members of the Administrative Steering Team (ADST) echoed this concern, citing previous experiences where reports for different initiatives were submitted, only to be filed away without further comment. Criteria, in the form of a rubric, needed to be developed to measure the quality and level of implementation of assessment plans across the institution. An opportunity to develop such a mechanism presented itself in the form of a summer institute with MSCHE. The OMCA office submitted a proposal and was selected to send a faculty team to the institute to develop a rubric to evaluate student learning assessment plans and reports. This rubric was adapted for use in the review of administrative assessment plans and reports.

The feedback rubric identifies four major elements of the continuous improvement cycle and corresponding criteria; mission, responsibilities and services, assessment methods, and reporting and use of results; along with five performance levels; Best Practice (BP), Meets Standard (MS), and Opportunity for Improvement (OFI-3 levels). The performance levels were adapted from Suskie (2004) and the criteria for the elements followed directly from the assessment plan template, creating a transparency of expectations related to assessment efforts.

The assessment plan template and the feedback rubric were revised for the 2006-07 academic year based on comments from units and observations by ADST reviewers. The current template contains the same elements, but more structure is provided for units in the form of matrices which show the alignment of responsibilities, services, and proposed measures. The section on assessment reporting was significantly restructured to ensure units would report the completion of an entire improvement cycle. The feedback rubric was revised accordingly.

All unit-level assessment plans, as well as assessment plan templates and feedback rubrics may be viewed on our web page:

Assessment plans: [http://www.uprm.edu/omca/assessment\\_plans.php](http://www.uprm.edu/omca/assessment_plans.php)

Templates and rubrics: <http://www.uprm.edu/omca/resources.php>

### *Quality of Administrative Assessment Plans*

All administrative offices, including academic departments and dean's offices, submitted assessment plans in 2006. The analysis of assessment plan quality focuses only on non-academic administrative offices. In 2006, 44 administrative offices submitted assessment plans. As of March 21, 2007, 39 of these units had submitted a revised assessment plan to OMCA.

The overall quality of the administrative assessment plans increased from 2006 to 2007 based on the review of the respective plans using the rubric earlier mentioned, as shown in Table 3. The improvement was particularly marked for the elements of responsibilities and services (31%) and assessment methods (29%).

**TABLE 3: CHANGE IN OVERALL PERFORMANCE BY KEY ELEMENT FROM 2006 TO 2007**

Key Element	Percent of Units Meeting All Criteria (MS or BP)		% Change in Performance
	2006 (N=44)	2007 (N=39)	
Mission	93%	97%	+3%
Responsibilities & Services	61%	92%	+31%
Assessment Methods	20%	49%	+29%

Of the units that received opportunity for improvement (OFI) ratings in 2006, all demonstrated improvement in delineation of mission and 84% improved in the specification of responsibilities and services for 2007 (see Table 4). Notably, 67% of units improved from OFI to Best Practice in both of these key elements. For assessment methods, only 40% of units with opportunities for improvement showed improved performance: 11% to Meets Standard and 29% to Best Practice. Improvement is also noted for units that received Meets Standard ratings in 2006. The majority (58%) increased their rating to Best Practice for mission and responsibilities and services, while 25% improved to Best Practice in assessment methods.

**TABLE 4: RATE OF IMPROVED PERFORMANCE BY KEY ELEMENT FROM 2006 TO 2007**

Key Element	Percentage of Units with Improved Performance from 2006 to 2007		
	OFI to MS	OFI to BP	MS to BP
Mission	33%	67%	58%
Responsibilities & Services	17%	67%	58%
Assessment Methods	11%	29%	25%

Table 5 shows by administrative division the number and percentage of administrative assessment plans which met each of the specified rubric criteria for 2006 and 2007. Overall, the greatest improvement was seen in the percentage of units meeting the Best Practice criterion in each key element: 41% for mission, 53% for responsibilities and services, and 47% for assessment methods. This improvement pattern was generally consistent across the units in the four administrative divisions. Outside of the Best Practice criteria, the criterion with the greatest improvement overall was the identification of assessment methods for each key service (47%), followed by the identification of primary clientele based on key services (27%). To compare relative improvement by administrative division, we examined the criteria attained by less than 100% of the division's units in 2006 to see whether any gains had been made for 2007. The most improved performance overall was in the group of units belonging to the Chancellor's office, where increased attainment was seen in 13 of 14 criteria (93%). The units under the Office of the Dean of Students and the Dean of Academic Affairs improved attainment on 10 of 11 criteria (91%) and 10 of 12 criteria (83%), respectively. For the units of the Office of the Dean of Administration, performance was improved on 60% of eligible criteria (6 of 10).

#### *Quality of Administrative Assessment Projects*

Reports from the first official cycle of administrative assessment projects were requested by OMCA to be submitted at the beginning of March 2007. As of March 21, 2007, 39 of the 44 project reports (89%) had been submitted. While the 2006 assessment plan template allowed for units to identify concrete actions they had taken or would take to improve services and processes, the 2007 template requested information on specific steps in the assessment cycle. The feedback rubric follows the categories requested on the template.

Nearly all of the submitted reports (36 or 92%) described an assessment project in progress or completed. This result was encouraging for the first year of implementation. Based on the review of the 39 projects, 5% achieved Best Practice, 21% achieved Meets Standard, and 74% achieved Opportunity for Improvement, signifying that over one quarter of units meet or exceed the standards set by the rubric. Most of the units (74%) described a project clearly aligned to the assessment design described in their assessment plan. About half of the units provided data-based justification for the assessment project (54%) while slightly under two-thirds (64%) described an action they had taken to improve a service or process. In more than half of the reports (54%), results were not yet available or were not stated in terms of changes in satisfaction or efficiency as a result of the improvement intervention. In turn, less than half of the reports (41%) specified concrete actions based on the assessment results. The results for each criterion are shown in Table 6.

**TABLE 5: NUMBER AND PERCENTAGE OF ADMINISTRATIVE ASSESSMENT PLANS WHICH MET SPECIFIED CRITERIA, 2006-2007**

Criterion	Number and percentage of administrative assessment plans which met criterion																			
	Total				Academic Affairs				Administration				Students				Chancellor's Office/ CID/ CoHemis			
	2006 (N=44)		2007 (N=39)		2006 (n=8)		2007 (n=8)		2006 (n=13)		2007 (n=12)		2006 (n=11)		2007 (n=11)		2006 (n=12)		2007 (n=8)	
Office mission is identified	43	98%	39	100%	8	100%	8	100%	13	100%	12	100%	11	100%	11	100%	11	92%	8	100%
Office mission has been approved by unit members and is reviewed regularly	43	98%	37	95%	7	88%	8	100%	13	100%	11	92%	11	100%	11	100%	12	100%	8	100%
Office mission supports the institutional mission	41	93%	38	97%	8	100%	8	100%	12	92%	11	92%	11	100%	11	100%	10	83%	8	100%
Mission is widely publicized through means including the web page (BP)	16	36%	30	77%	3	38%	7	88%	8	62%	11	92%	1	9%	8	73%	4	33%	4	50%
MISSION-Meet Standard or Best Practice	41	93%	37	95%	7	88%	8	100%	12	92%	11	92%	11	100%	11	100%	10	83%	8	100%
Major responsibilities and duties are identified	41	93%	38	97%	8	100%	8	100%	13	100%	11	92%	10	91%	11	100%	10	83%	8	100%
Major responsibilities and duties are directly linked to mission	42	95%	38	97%	8	100%	8	100%	13	100%	11	92%	11	100%	11	100%	10	83%	8	100%
Key services are identified	34	77%	36	92%	5	63%	8	100%	12	92%	10	83%	9	82%	10	91%	8	67%	8	100%
Key services are directly linked to the mission	38	86%	36	92%	5	63%	8	100%	12	92%	10	83%	11	100%	10	91%	10	83%	8	100%
Primary clientele are identified based on key services	31	70%	38	97%	4	50%	8	100%	11	85%	12	100%	7	64%	10	91%	9	75%	8	100%
Responsibilities and services are widely publicized through means including the web page (BP)	14	32%	33	85%	2	25%	7	88%	6	46%	10	83%	2	18%	10	91%	4	33%	6	75%
RESPONSIBILITIES AND SERVICES-Meet Standard or Best Practice	27	61%	36	92%	4	50%	8	100%	11	85%	10	83%	6	55%	10	91%	6	50%	8	100%
Methods to assess each key service are identified	9	20%	26	67%	2	25%	7	88%	3	23%	6	50%	4	36%	8	73%	0	0%	5	63%
Measures of client (user) satisfaction are identified	31	70%	27	69%	6	75%	6	75%	11	85%	5	42%	9	82%	10	91%	5	42%	6	75%
Measures of service effectiveness and/or efficiency are identified	28	64%	32	82%	6	75%	8	100%	6	46%	7	58%	6	55%	10	91%	10	83%	7	88%
Copies of assessment instruments are attached	30	68%	25	64%	6	75%	7	88%	8	62%	4	33%	6	55%	8	73%	10	83%	6	75%
Assessment plan is reviewed annually	42	95%	35	90%	7	88%	7	88%	13	100%	11	92%	10	91%	9	82%	12	100%	8	100%
Major assessment projects or questions for the unit are prioritized and scheduled. (BP)	1	2%	19	49%	0	0%	5	63%	1	8%	5	42%	0	0%	5	45%	0	0%	4	50%
ASSESSMENT METHODS – Meet Standard or Best Practice	9	20%	19	49%	2	25%	6	75%	3	23%	2	17%	4	36%	6	55%	0	0%	5	63%

**TABLE 6: NUMBER AND PERCENTAGE OF ADMINISTRATIVE ASSESSMENT REPORTS WHICH MET SPECIFIED CRITERIA, 2006-2007**

Criterion	Number and percentage of administrative assessment reports which met specified criterion									
	Total		Academic Affairs		Administration		Students		Chancellor's Office/ CID/ CoHemis	
	(N=39)		(n=8)		(n=12)		(n=11)		(n=8)	
At least one assessment project focused on a key service or administrative process of the unit is reported (in progress or completed)	36	92%	7	88%	12	100%	9	82%	8	100%
Assessment project is clearly aligned to assessment design described in unit assessment plan	29	74%	6	75%	6	50%	9	82%	8	100%
Data-based justification for the project is provided	21	54%	6	75%	4	33%	7	64%	4	50%
Action to improve the service or process is described, including date of implementation and expected results	25	64%	6	75%	8	67%	6	55%	5	62%
Assessment results describe changes in client satisfaction and service efficiency/effectiveness as a result of the intervention	18	46%	5	63%	4	33%	3	27%	6	75%
Assessment results are shared with unit personnel	21	54%	3	38%	5	42%	6	55%	7	88%
Concrete actions based on the assessment results are identified	16	41%	4	50%	5	42%	2	18%	5	63%
Positive assessment results and improvements are shared with clientele and other audiences as appropriate through means such as the web page and public presentations (BP)	2	5%	1	13%	0	0%	1	9%	0	0%
REPORTING AND USE OF RESULTS – Meet Standard or Best Practice	10	26%	3	38%	2	17%	1	9%	4	50%

The projects conducted by the units can be divided into four types: development and piloting of an assessment tool, improvement of a service or product, improvement of an administrative process, and improvement of office structure or equipment. Most of the projects (18 or 50%) were related to the improvement of a service or product, including increasing publicity of the same. Nearly one-third (31%) of projects targeted the improvement of an administrative process. The number of projects conducted by project type, including specific examples, are shown in Table 7.

**TABLE 7: TYPES OF ASSESSMENT PROJECTS COMPLETED BY ADMINISTRATIVE UNITS IN 2007**

Type of Project	Number of Projects (%)	Projects (N=36)		
Development and piloting of assessment tool	4 (11%)	Athletic Activities Federal Projects	Off-Campus Housing Public Relations	
Improvement of a service or product (including publicity)	18 (50%)	Campus Printing Computer Center Counseling and Orientation Economic Dev. Center General Library Graduate Studies	Inst. Research & Planning Medical Services Personnel Liaison Placement Prof. Development Center Quality of Life	Registrar Soc. and Cultural Activities Student Affairs (Dean) Student Ombudsman Traffic and Security
Improvement of an administrative process	11 (31%)	Academic Affairs (Dean) Academic Senate & Administration Board Auxiliary Services Band & Orchestra	Bookstore Equal Employment Opportunity Finance Graduate Studies	Human Resources Occupational Health & Safety University Enterprises
Improvement of office resources (structure, equipment, personnel)	3 (8%)	Alumni	Economic Assistance	Finance

## *Summary*

In the past two years, UPRM has made significant progress in the implementation of a continuous improvement culture among the administrative units. The OMCA ADST has assessment liaisons from the offices of the deans of students and the dean of administration, and also from the Chancellor's office. The Office of the Dean of Students has formed an assessment committee, and the Office of the Dean of Administration has coordinated several workshops for its directors to develop assessment plans, action plans, and assessment reports. While the Office of the Dean of Academic Affairs does not have any formal representation on the ADST, the Associate Dean works closely with OMCA to ensure the units are on track.

Our primary opportunity for improvement in the implementation of the institutional assessment plan is the increased adoption of the continuous improvement culture, which would be evidenced by a greater number of administrative units completing assessment projects resulting in the improvement of services and administrative processes. Based on the results of the 2007 evaluation process, the OMCA will develop training opportunities and increase consultation to individual units, perhaps through a cadre of coaches from the ADST.

## **Implementation of UPRM Institutional Plan for the Assessment of Student Learning**

### *Implementation Timeline*

Since the receipt of the 2005 MSCHE evaluation team report in June 2005, UPRM has taken several steps to augment and implement the institutional plan for the assessment of student learning.

September 2005	Office of Continuous Improvement and Assessment (OMCA) is created by the UPRM Administrative Board OMCA Academic Steering Team (ACST) formed
December 5, 2005	Department of Mechanical Engineering conducted "Closing the Loop" retreat to share departmental assessment results
January 18, 2006	Workshop conducted with academic assessment coordinators to share the loop closing process in the College of Arts & Sciences
February 1, 2006	College of Business Administration assessment coordinator submitted assessment report for first semester 2005-06 to Dean of Business Administration
February 2006	UPRM Chancellor hosted retreat of 40 faculty members to discuss the AAC&U document "Greater Expectations: A New Vision for Learning as a Nation Goes to College" and to initiate development of a graduating student profile
March 15, 2006	College of Agricultural Sciences assessment progress report presented to the ACST
May 2006	Template for student learning assessment reports developed and distributed to academic assessment coordinators, department directors, and deans
May 10, 2006	College of Arts & Sciences first "Closing the Loop" activity conducted to share results from each of 13 departments

June 12-13, 2006	OMCA team (director, assessment specialist, and 4 faculty members) participated in the MSCHE Summer Student Learning Assessment Institute and developed a draft feedback rubric for student learning assessment plans and reports
June 15, 2006	College of Business Administration assessment coordinator submitted assessment report for second semester 2005-06 to Dean of Business Administration
June 30, 2006	Due date to submit student learning assessment reports to OMCA for all academic units
July 2006	Rubric to evaluate student learning assessment plans and reports finalized by OMCA staff
August-September 2006	All student learning assessment plans and reports evaluated in four categories– mission, learning outcomes, assessment methods, and reporting and use of results – by OMCA Academic Assessment Review Committee
September 2006	Performance tabulated for each college to determine opportunities for improvement in the institutional continuous improvement and assessment process (see “OMCA Annual Report – <a href="http://www.uprm.edu/omca/Reports/PDF/final.pdf">http://www.uprm.edu/omca/Reports/PDF/final.pdf</a> )
September–October 2006	Presentations made to each college office to explain the feedback process and deliver results of the evaluation
October 2006 – present	Consultations provided to assessment coordinators and individual units on the implementation of assessment plans
October 2006	OMCA General Education Assessment Task Force is formed to develop a general education assessment plan  College of Arts and Sciences published the first annual edition of “Avalúo Plus,” a peer-reviewed journal dedicated to the publication of articles on the assessment of student learning
November 30, 2006	College of Agricultural Sciences “Closing the Loop” activity conducted to share results from each of nine (9) departments and programs  Department of Mechanical Engineering conducted “Closing the Loop” retreat to share departmental assessment results
January 2007	Student learning assessment report template and rubric revised based on observations during the 2005-06 feedback process and distributed to assessment coordinators, department directors, and deans
January 16, 2007	College of Arts & Sciences second “Closing the Loop” activity conducted to share results from each of 13 departments
February 1, 2007	General Education Assessment Plan delivered to OMCA director by General Education Assessment Task Force  College of Business Administration assessment coordinator submitted assessment report for first semester 2006-07 to Dean of Business Administration

February 7, 2007	GE Assessment Plan approved by OMCA ACST as an annex to the Institutional Plan for the Assessment of Student Learning
March 1-3, 2007	OMCA director and assessment specialist participated in the AAC&U Network for Academic Renewal Conference on General Education and Assessment
March 15-18, 2007	UPRM Chancellor hosted second faculty retreat to discuss the proposed graduating student profile and to develop action plans for four focus areas: General Education, Student Engagement, Academic Integrity, and Global Consciousness
April 2007	<i>Institutional Plan for the Assessment of Student Learning</i> to be revised to reflect current assessment planning and reporting processes, along with the plan for the assessment of general education
April 20, 2007	Department of Electrical and Computer Engineering to conduct “Closing the Loop” retreat to share departmental assessment results
May 25, 2007	Due date to submit student learning assessment reports to OMCA for all academic departments and programs
August 2007	All student learning assessment reports to be evaluated in the area of reporting and use of results by the OMCA Academic Assessment Review Committee
Ongoing	Workshops on assessment at the departmental, college, and institutional level

Each of the colleges maintains an assessment website with links to assessment plans and resources. Notably, the College of Arts and Sciences has maintained an assessment “blog” since September 2004.

Agricultural Sciences: <http://www.uprm.edu/agricultura/avaluo/>

Arts & Sciences: <http://www.uprm.info/avaluo/>

Business Administration: <http://enterprise.uprm.edu/assesment-es.htm>

Engineering: <http://seed.uprm.edu/>

#### *Development of a Standardized Student Learning Assessment Process*

As part of the CIEI efforts, all academic departments had developed student learning outcomes and assessment plans. Some of the plans, particularly those in the College of Agricultural Sciences, were developed hastily to meet the deadline of the MSCHE visit in March 2005. The ACST identified the need for certain departments to revise their assessment plans during the 2005-06 academic year. All departments were charged to identify at least one assessment project and complete one assessment cycle by the end of the year. This project would be described in an assessment report to be submitted to the OMCA office.

As interest and motivation across the institution was growing, the OMCA staff recognized the need to be able to provide timely feedback to units on their assessment plans and reports. The MSCHE Student Learning Assessment Summer Institute in 2006 proved to be a pivotal event in the direction of our continuous improvement processes. The readings, workshops, team time, and facilitator guidance at the institute resulted in our team’s creation of a rubric targeted at student learning assessment plans and reports. The rubric identified four major elements and corresponding criteria: mission, learning outcomes, assessment methods, and reporting and use of results, along with five performance levels; Best Practice, Meets Standard, and Opportunity for Improvement (3 levels). The rubric criteria were adapted from a

presentation by Jones (2006) at the MSCHE summer institute, and the performance levels were modified from Suskie (2004).

Based on comments from units and observations by the Academic Assessment Review Committee, the student learning assessment report template and the feedback rubric were revised for the 2006-07 year. During the first cycle, the rubrics were developed after units had submitted their plans and reports, thus they were not aware of the rubric criteria at the time their plans and reports were prepared. The report template was restructured in January 2007 to ensure units would report the completion of an entire improvement cycle. The feedback rubric was revised accordingly to match the emphases of the template. For the second cycle, units will be familiar with the rubric criteria prior to submitting reports (May 2007).

All department student learning assessment plans, as well as student learning assessment report templates and feedback rubrics may be viewed on our web page:

Assessment plans: [http://www.uprm.edu/omca/assessment\\_plans.php](http://www.uprm.edu/omca/assessment_plans.php)

Templates and rubrics: <http://www.uprm.edu/omca/resources.php>

### *Quality of Student Learning Assessment Plans*

Based on the review of the 29 plans submitted in 2005, most units (66%) met the specified criteria for mission while less than half (41%) met the criteria for learning outcomes. Only 21% of the units met the criteria specified for assessment methods.

Table 8 shows the number and percentage of student learning assessment plans which met each of the specified rubric criteria for 2006 and 2007, listed by academic college. Two criteria were attained by all units – identification of mission and identification of department/program learning outcomes. Nearly all units (97%) identified multiple assessment measures, including indirect measures of student learning and specified measurable outcomes that are linked to the department's mission (93% each). The standard criteria attained by the fewest number of units include provision of evidence to show how learning outcomes are addressed across the curriculum (48%) and specification of a timeline or implementation and administration (55%).

The pattern of missed criteria differs slightly by academic college. In addition to the two criteria noted above, few units in Agricultural Sciences provided evidence of alignment of assessment measures to learning outcomes (22%). Less than half of the units (44% each) emphasized direct measures of assessment and provided information on participants for each assessment method. Slightly over half of the units (56% each) stated clear learning outcomes, spanning multiple learning domains, including higher order thinking.

For Arts and Sciences, less than half of the units (38%) provided copies of locally-developed assessment tools. Units in Engineering did not have difficulty with the two standard criteria missed by units in other colleges, but half of the units (50% each) did not emphasize direct measures of student learning or specify measures that allow student learning to be measured over time. The assessment plan for the College of Business Administration met all of the standard criteria, and was one of only four plans to do so. The other plans attaining all criteria are Agricultural Education, Civil Engineering, and Physical Education.

### *Quality of Student Learning Assessment Projects*

Reports from the first official cycle of student learning assessment projects were given the deadline of June 15, 2006 for submission. By August 2006, all units from Arts & Sciences, Business Administration, and Engineering had submitted reports; however, only two departments from Agricultural Sciences –

Agricultural Economics & Rural Sociology and Agricultural & Biosystems Engineering – had done so. The OMCA Academic Assessment Review Committee reviewed the 22 reports using the feedback rubric developed at the MSCHE summer institute.

Nearly all of the submitted reports (21 or 95%) reported major assessment results. Based on the review of the submitted projects, all but one of the units reported assessment results: 64% achieved Meets Standard and the remaining 36% achieved Opportunity for Improvement. No unit achieved a Best Practice. All 13 departments of Arts & Sciences and the Department of Industrial Engineering met all criteria for the assessment reports.

Most of the units presented clear assessment results (82%) which indicated the extent to which priority learning outcomes had been achieved (77%). Overall, results are used to improve student learning (82%) and are shared with department faculty (82%) and multiple constituents (77%). Less than two-thirds of units (64% each) provided evidence about how assessment results are used in strategic planning or identified next assessment priorities based on the results. The pattern of missed criteria is similar in Agricultural Sciences and Business Administration, including a lack of data on the extent to which priority learning outcomes are achieved and the use of results to guide strategic planning and identify assessment priorities. In Engineering, two-thirds of units did not present clear assessment results nor were these results shared with department faculty and constituents. Most engineering departments (67%) did not present evidence to show how assessment results are used to improve student learning. Further, nearly all units (83%) did not indicate how the results are used for strategic or assessment planning. The results for each criterion are shown in Table 9.

The focus of the assessment projects conducted by the units can be divided into three main types: performance or learning outcome(s) in general education or gatekeeper course, learning outcome(s) within course, and learning outcome(s) across curriculum. The greatest number of projects (12 or 55%) focused on learning outcomes within a particular course. The list of units completing projects by project type is shown in Table 10.

The assessment methods employed for these projects include both direct and indirect methods. The most frequently used direct method of assessment was pre-post test (6), followed by samples of student work or performance (4). Among the indirect methods used, the most common was course evaluation (5), followed by student survey or questionnaire (4). Five projects used only indirect methods, while the other 17 used direct methods or a combination of direct and indirect methods. Table 11 displays the assessment tools used in 2006, by assessment type.

**TABLE 8: NUMBER AND PERCENTAGE OF STUDENT LEARNING ASSESSMENT (SLA) PLANS WHICH MET SPECIFIED CRITERIA, 2006**

Criterion	Number and percentage of SLA plans which met specified criterion									
	Total (N=29)		Agricultural Sciences (n=9)		Arts & Sciences (n=13)		Business Administration (n=1)		Engineering (n=6*)	
Department mission is identified	29	100%	9	100%	13	100%	1	100%	6	100%
Department mission statement is student-focused	24	83%	6	67%	12	92%	1	100%	5	83%
Department mission identifies the professional profile of its graduates*	22	76%	6	67%	10	77%	1	100%	5	100%
Department mission directly connects with the institutional mission	24	83%	7	78%	11	85%	1	100%	5	83%
Department mission is communicated publicly, i.e., catalogue, web	23	79%	8	89%	8	62%	1	100%	6	100%
Department mission is communicated via means other than the course catalogue and web site (BP)	6	21%	0	0%	0	0%	1	100%	5	83%
MISSION – Meets Standard or Best Practice	19	66%	6	67%	7	54%	1	100%	5	83%
Learning outcomes are identified for the department or program (not for individual class or course)	29	100%	9	100%	13	100%	1	100%	6	100%
Learning outcomes are clear	25	86%	5	56%	13	100%	1	100%	6	100%
Learning outcomes are measurable	27	93%	7	78%	13	100%	1	100%	6	100%
Learning outcomes span multiple learning domains, i.e., cognitive, behavioral, psychomotor	25	86%	5	56%	13	100%	1	100%	6	100%
Learning outcomes are student-focused	25	86%	5	56%	13	100%	1	100%	6	100%
Learning outcomes clearly link to the department's mission statement	27	93%	8	89%	13	100%	1	100%	5	83%
Learning outcomes are addressed across the curriculum, i.e., each outcome in at least 2 courses (evidence provided)	14	48%	2	22%	6	46%	1	100%	5	83%
Learning outcomes include higher order learning (e.g., analysis, evaluation, creation, critical thinking)	25	86%	5	56%	13	100%	1	100%	6	100%
Targets are set for improvement or attainment of student learning outcomes (BP)	0	0%	0	0%	0	0%	0	0%	0	0%
LEARNING OUTCOMES – Meets Standard or Best Practice	12	41%	1	11%	6	46%	1	100%	4	67%
Multiple (3 or more) assessment measures are identified	28	97%	9	100%	12	92%	1	100%	6	100%
Copies of assessment instruments are provided	18	62%	7	78%	5	38%	1	100%	5	83%
Assessment measures are aligned to learning outcomes	20	69%	2	22%	12	92%	1	100%	5	83%
Direct measures of student learning are emphasized	20	69%	4	44%	12	92%	1	100%	3	50%
Indirect measures of student learning are utilized	28	97%	9	100%	12	92%	1	100%	6	100%
Assessment measures allow student performance to be gauged over time	22	76%	7	78%	11	85%	1	100%	3	50%
Assessment design includes a timeline for implementation and administration	16	55%	3	33%	7	54%	1	100%	5	83%
Assessment design indicates who will participate in each assessment	22	76%	4	44%	12	92%	1	100%	5	83%
Major assessment questions or priorities are identified that guide the assessment plan (BP)	0	0%	0	0%	0	0%	0	0%	0	0%
ASSESSMENT METHODS - Meets Standard or Best Practice	6	21%	1	11%	3	23%	1	100%	1	17%

\* For this criterion, n=5 for Engineering. Department of Engineering Science and Materials does not offer a degree program, thus department mission does not describe graduate profile.

**TABLE 9: NUMBER AND PERCENTAGE OF STUDENT LEARNING ASSESSMENT (SLA) REPORTS WHICH MET SPECIFIED CRITERIA, 2006**

Criterion	Number and percentage of SLA reports which met specified criterion									
	Total (N=22)		Agricultural Sciences (n=2)		Arts & Sciences (n=13)		Business Administration (n=1)		Engineering (n=6)	
Major assessment results are reported	21	95%	2	100%	13	100%	1	100%	5	83%
Assessment results are clear	18	82%	2	100%	13	100%	1	100%	2	33%
Information from the assessment results is shared with multiple constituents	17	77%	1	50%	13	100%	1	100%	2	33%
The assessment results are reviewed and discussed by department faculty	18	82%	2	100%	13	100%	1	100%	2	33%
Assessment results indicate the extent to which priority learning outcome(s) have been achieved	17	77%	1	50%	13	100%	0	0%	3	50%
Assessment results are used to improve student learning (e.g., change/revise learning outcomes, change/revise courses or curriculum)	18	82%	2	100%	13	100%	1	100%	2	33%
Assessment results are used in strategic planning	14	64%	0	0%	13	100%	0	0%	1	17%
Assessment results are used to identify next assessment priority and/or to change assessment plan	14	64%	0	0%	13	100%	0	0%	1	17%
Standards have been established that clearly describe performance levels considered minimally adequate for students completing the program, and positive assessment results are shared with faculty, students, academic administrators, prospective students, and other audiences as appropriate (BP)	0	0%	0	0%	0	0%	0	0%	0	0%
REPORTING AND USE OF RESULTS – Meets Standard or Best Practice	14	64%	0	0%	13	100%	0	0%	1	17%

**TABLE 10: TYPES OF ASSESSMENT PROJECTS COMPLETED BY ACADEMIC UNITS IN 2006**

Type of Project	Number of Projects (%)	Projects (N=22)
General education or gatekeeper course (including students outside major)	3 (14%)	Biology English Humanities Mathematics
Learning outcome(s) within course	12 (55%)	Agricultural Economics & Rural Sociology Agricultural & Biosystems Engineering Biology Business Administration Economics English Humanities Mechanical Engineering Nursing Physical Education Social Sciences
Learning outcome(s) across curriculum	7 (32%)	Chemical Engineering Chemistry Geology Hispanic Studies Industrial Engineering Marine Sciences Physics

**TABLE 11: TYPES OF ASSESSMENT METHODS USED IN STUDENT LEARNING ASSESSMENT PROJECTS IN 2006**

Type	Tool	Units
Direct	Pre/post test	Agricultural & Biosystems Engineering Biology English Humanities Physical Education Social Sciences
	Samples of student work or performance	Chemistry Electrical/Computer Engineering Hispanic Studies Mechanical Engineering
	Course grades	Marine Sciences Mathematics
	Instructor-created exam/test	Economics Marine Sciences
	Standardized test	Mathematics
	Student portfolio	Nursing
	Rubric	Nursing
Indirect	Course evaluation	Agricultural Economics & Rural Sociology Chemical Engineering Chemistry Civil Engineering Industrial Engineering
	Student survey or questionnaire	Agricultural & Biosystems Engineering Hispanic Studies Industrial Engineering Physics
	Alumni survey	Industrial Engineering
	Employer survey	Industrial Engineering
	Faculty survey	Geology
	Student interview	Geology

*Ongoing Assessment Projects in 2006-07*

In May 2007, all academic departments will report on assessment projects completed during the academic years 2005-06 and 2006-07.

- Agricultural Sciences (CAgS): In November 2006, all 8 departments and programs presented their assessment projects for 2005-06. Three of the projects involve assessment of one or more learning outcomes across the curriculum, and four involve assessment of learning outcomes in a particular course. One project was more administrative in nature, so the corresponding unit will choose a more appropriate project, focused on student learning, for its May 2007 report.
- Arts & Sciences (CAS): In January 2007, all 13 departments of the CAS presented their assessment projects for the second loop closing activity. Most of the projects (6) were focused on one or more learning outcomes in a particular course, with four projects focused on learning outcomes across the curriculum. Three projects examined learning outcomes in general education courses. CAS units are receiving significant support and consultation from the assessment coordinators and the office of the Associate Dean of Assessment.
- Business Administration (CBA): Several professors are completing assessment projects at the course-level to examine student learning outcomes. The CBA administers two standardized tests: the Previous Knowledge Assessment Test (PKAT), a locally developed test, and the Major Field Test (MFT), developed by ETS. Performance on the distinct subtests of the MFT as they relate to the student learning outcomes is being examined in the period of the past three years to determine areas for improvement. The CBA is expected to undergo an accreditation visit from the AACSB during summer 2008 or second semester 2009.
- Engineering (COE): The COE is preparing for the next ABET accreditation visit in first semester 2008-09. The approach to assessment in this college is distinctly different than the others, all learning outcomes are measured every year, and results are used to suggest curricular and instructional changes. Departments have been encouraged to show how data guide changes in curricula and instruction, along with resulting improvements in student learning.

*General Education Assessment Plan*

The General Education (GE) Assessment Plan was developed by the UPRM General Education Assessment Task Force during first semester 2006 and was formally submitted to OMCA in February 2007. This plan serves to augment the existing “Institutional Plan for the Assessment of Student

Learning” and provides a necessary component for the assessment of general education standards and related student learning outcomes. The plan contains specific steps, measures, and recommendations to ascertain that all UPRM constituencies participate in its development and enactment by:

- **Outlining the nine institutional GE outcomes and minimum GE requirements.** The plan provides mechanisms for each college to specify its particular general education philosophy, goals, and curricular requirements in the UPRM catalogue.
- **Delineating ways to coordinate the plan and establishing the program and specifying strategies** (such as designating responsibilities for the enactment and implementation of the GE assessment plan).
- **Including both direct and indirect forms of assessment administered on a recurring cycle.** The direct forms of assessment consist of: (a) rubrics, (b) other embedded assessment approaches, and (c) standardized testing. Indirect forms of assessment involve the use of questionnaires including the National Survey of Student Engagement (NSSE) and three surveys to be developed by the institution.
- **Implementing measures for GE assessment.** Assessment of general education will be conducted annually following a three-year cycle in which each general education outcome is assessed every three years. Academic units will conduct assessment of GE as part of their existing assessment of student learning outcomes. The plan will be reviewed annually by the OMCA ACST and will be revised as necessary to reflect changes in general education definitions, requirements, and offerings.
- **Utilizing GE assessment results.** An annual GE report will be developed by the General Education Coordinator with assistance from Assessment Liaisons in the Computer Center, OIIP, and OMCA. Findings will be reported to the Administrative Board and the Academic Senate and shared with faculty, academic leaders, students, and external constituencies as appropriate. The GE Committee will utilize the findings to identify priorities and opportunities for improvement. Assessment and curricular committees at the college and department levels will receive disaggregated assessment results to facilitate the identification of priorities at each of these respective levels.

During the recent Chancellor’s faculty retreat (see March 15-18, 2007 in timeline), an action plan was developed by a group of interested faculty members and the Dean of Academic Affairs. The General Education Coordinator and committee members will be appointed by said Dean by the end of March 2007, and the committee will begin meeting immediately to take advantage of the summer months for the development of the proposed pilot studies for 2007-08. Taking these steps will allow UPRM to demonstrate a firm commitment to its mission, values, and strategic goals. The full plan may be viewed at <http://www.uprm.edu/omca/taskforce/PDF/GEAPlan.pdf>

### *Summary*

Since the MSCHE visit in 2005, UPRM has demonstrated progress in the implementation of the institutional student learning assessment plan. Nearly all units (except in the College of Agricultural Sciences) provided evidence of the completion of an assessment project in 2006, and preliminary reports from the College of Agricultural Sciences indicate that all units will submit reports this year. The project-based approach has worked most successfully in the College of Arts and Sciences, where the assessment process is running smoothly due to the excellent coordination of and support provided by the departmental and college-level assessment coordinators.

A major accomplishment was the development of the institutional general education assessment plan, which signifies the commitment to ensure that all students who graduate from UPRM attain the

institutional student learning outcomes. In the very near future, the proposed general education structure will be implemented by the Office of the Dean of Academic Affairs, and will finally give this important learning issue a formal configuration.

Our most pressing opportunity for improvement in the implementation of the institutional student learning assessment plan is in ensuring the adoption of the continuous improvement culture across all colleges. Several units ascribe to the belief that “more is better” when it comes to data collection, prohibiting the analysis and use of data for improvement of student learning. OMCA will continue to work with units to identify do-able projects that result in increased learning.

## References

Jones, E. 2006. “Developing Assessment Plans,” Presentation at MSCHE Student Learning Assessment Summer Institute , June 12-13, 2006, Philadelphia, PA.

Suskie, L. 2004. “Assessing Student Learning: A Common Sense Guide.” Bolton, MA: Anker.

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## Supplemental Materials (four copies each)

1. La Gaceta Colegial, January-February 2007 featuring article on OMCA “Comprometidos con las mejores practicas universitarias”
2. OMCA Annual Report, 2005-06
3. “Raising the Bar in Quest of Performance Excellence” by Sharma & Dika
4. UPRM IPEDS Report, 2006-07
5. Avalúo Plus, October 2006

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