

***Cambiando la Cultura de Avalúo:
From Compliance to Continuous Improvement at University of Puerto Rico-Mayagüez¹***

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Introduction

During the last two decades, there has been a general shift toward more formal systems of quality assurance in higher education worldwide (El-Khawas, 2001). In the United States, accreditation is the primary means for establishing a culture of quality in higher education (Eaton, 2003; 2006). The philosophy of accreditation in the US has changed significantly over the past fifteen years. Primarily, the focus has shifted from inputs to student learning outcomes; to institutions taking responsibility for student learning through outcomes assessment (Wergin, 2005). Ideally, accreditation in the 21st century aims to be a catalyst for institutional self-reflection, learning, and improvement (Wergin).

This paper presents an informal process study of the events in the development of an assessment culture at one public higher education institution in Puerto Rico – the University of Puerto Rico at Mayagüez (UPRM). This institution is a unique object of study, given its geographical and cultural connections with the Caribbean and its political connections with the United States, including the structure, funding, and regulation of higher education. The paper is essentially a study of organizational change focusing on the temporal occurrence of significant events (Van de Ven & Poole, 2005). First, a brief background is presented to describe the particular role of accreditation in Puerto Rico and the institutional context. Next, narratives of events and patterns of characteristics in four areas, as expressed in institutional accreditation and assessment reports, are presented to describe the developments in the past 10 years from a culture of compliance with accreditation requirements to one of continuous improvement. Finally, the implications of the UPRM experience for other institutions are discussed.

Background

Differing Roles for Accreditation

While Puerto Rico's institutions of higher education share some similarities with other institutions in the Caribbean region, accreditation plays a dramatically different role given its political affiliation with the United States. No regional self-regulating accrediting bodies exist in the Caribbean, but many postsecondary institutions have developed internal quality assurance mechanisms (World Bank, 2004). Among independent Caribbean nations, accredited institutions are awarded this status by national (governmental) accrediting bodies (e.g., University Council of Jamaica) (Roberts, 2001). There are several agencies and initiatives in the region supporting the development of a local accrediting body as an external quality assurance mechanism, e.g., CARICOM, World Bank Caribbean Knowledge and Learning Network project (World Bank, 2004). The Caribbean Area Network for Quality in Tertiary Education (CANQATE), formed in 2004, currently has 43 member institutions, all from English-speaking, independent Caribbean nations (CANQATE, 2007).

The absence of the American territories from these initiatives and networks is explained by their political affiliation. Institutions of higher education in the United States must be accredited to have access to student aid and other federal funds (Eaton, 2006). Public and private higher education institutions in Puerto Rico and the U.S. Virgin Islands are accredited by the Middle States Commission on Higher Education (MSCHE), one of the oldest regional accreditation agencies in the United States. Access to

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higher education is dramatically increased by federal funding in Puerto Rico, where most students are eligible for the Federal Pell Grant based on family income. The incentive for accreditation is plain – US\$699.2 million for Pell Grants and US\$374.4 million for new federal student loans in the 2008 Budget for Puerto Rico (U.S. Department of Education, 2007). Thus, while accreditation is voluntary, the benefits of this status might well be considered obligatory to the public of Puerto Rico, who perceive affordable and accessible higher education as a right not a privilege, and essential for the continued economic and social development of the island.

Institutional and Local Context

In a recent article in the *Chronicle of Higher Education*, Schmidt (2005) portrays an insightful picture of the institutional culture of the University of Puerto Rico (UPR) system based on interviews with the current and former presidents and leading researchers. He notes that the university system in Puerto Rico is largely a product of its relationship with the United States, beginning with the establishment of the UPR in 1903. Over the next century, UPR has developed into an eleven-campus university system of over 70,000 students with a governance structure similar to many mainland counterparts. According to the 2000 U.S. Census, the percentage of the Puerto Rican population 25 to 34 years with a bachelor's degree or higher is around 23%, under the national average of 28% but similar to comparable states including Arizona, California, Florida, and Texas. However, Schmidt (2005) notes that aspects of the institution are more akin to its Caribbean and Latin American neighbors, including low tuition, unstable leadership, top-down bureaucracy, and frequent campus shutdowns by pro-independence, antiwar, and labor movements. Tuition is low (\$1,300 per year in 2005) and tuition-generated revenues make up only 8% of the UPR operating budget. Restrictions to access based on income are further decreased due to student eligibility for the federal Pell Grant. The island's political instability, marked by the struggle between the pro-statehood and pro-commonwealth political parties, has a ripple effect on the leadership of the UPR. A change of political party often means a change in the leadership of the system and the campuses, from the president down to the deans of the colleges. The MSCHE, the accrediting body for all UPR campuses, has consistently cited the politicization of the UPR leadership as a concern and a roadblock to institutional effectiveness (MSCHE, 2005; Schmidt, 2005).

The Mayagüez Campus of the UPR, originally known as the College of Agriculture and Mechanical Arts (CAAM by its initials in Spanish), was established in 1911 and has been accredited by the Middle States Commission on Higher Education (MSCHE) since 1946. Mayagüez is located on the western coast of Puerto Rico about 100 miles from the capital of San Juan. After securing partial autonomy in 1942, CAAM became UPRM in 1966 when the Legislative Assembly of Puerto Rico reorganized the University of Puerto Rico into a system of autonomous campuses. Today, UPRM continues its development in the tradition of a Land Grant institution as a coeducational, bilingual, and nonsectarian institution, in four academic colleges: Agricultural Sciences, Arts and Sciences, Business Administration, and Engineering. UPRM is one of only three providers of engineering education on the island; the other two are private institutions.

The institution's mission and vision statements were recently revised in 2004 (UPRM, 2004). The UPRM vision is to assure that it 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 eight strategic goals, is to develop educated and cultured citizens 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; and provide 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.

With over 12,000 students, UPRM is the second largest institution in the system after Río Piedras. Overall enrollment is balanced by gender; in 2005-06, undergraduate enrollment for men and women

was 6,240 and 6,098 respectively (UPRM Office of Institutional Research & Planning (UPRM-OIIP), 2006). Nearly all full-time undergraduate students (87%) are in the traditional age range from 18 to 24 years. Based on the socioeconomic characteristics of the student body, retention and graduation rates are notable. Full-time, first-time degree seeking students re-enroll in the second year of studies at a rate of 84 percent. The graduation rate for students entering between 1990 and 1996 ranged from 56 to 62%, with the highest rates in the College of Engineering at 66 to 70 percent (OIIP, nd). Comparatively, among mainland U.S. colleges where more than half of students receive Pell Grants, only 20 such institutions have a graduation rate of higher than 50 percent (Haycock, 2006).

Full-time instructional faculty at the institution number around 600, including tenured, tenure-track, and temporary personnel (UPRM-OIIP, 2006). While females make up nearly half of the undergraduate student body, only 38% of staff members with an instructional, research, or public service responsibility are female (UPRM-OIIP, 2006). There has been an increase in the number of faculty members with a terminal degree in the past ten years (e.g., Ph.D., Ed.D.), and currently, the institution is financially supporting 52 future faculty members to complete their doctoral students abroad (UPRM Office of Continuous Improvement and Assessment (UPRM-OMCA), 2007).

Summary

Institutional accreditation is the primary quality assurance mechanism in Puerto Rico. An important implicit incentive for accreditation has been the access granted to federal student financial aid from the U.S. government. The Puerto Rican context is more related to its geographical context, however, as local political upheaval and social movements have played a large role in the stability and progress of public higher education institutions including the University of Puerto Rico-Mayagüez (UPRM). UPRM is a comprehensive, progressive institution which has provided higher education options for Puerto Rico for nearly a century.

Methodology

Method and Instrumentation

Van de Ven and Poole (2005) define a typology of four approaches to the study of organizational change, where approach depends on ontology (organization as noun vs. verb) and epistemology (study of variance vs. study of process). This study fits into the second approach described by these authors, as a process study following the narrative of an organizational entity that is moving through events, stages or cycles in the process of change. This study examines the change in one element of the organization, assessment culture, by narrating significant events in the process over the past ten years.

The framework to study the development of an assessment culture at UPRM is the Higher Learning Commission's (HLC, 2003) Assessment Culture Matrix, a tool designed to help institutions in the North Central Association (NCA) accreditation region demonstrate progress in the development of their assessment programs. While the tool is no longer used for accreditation purposes, it represents a useful framework to organize an institutional narrative on the development of an institutional culture of assessment, that is, an internalization of the importance of assessment to improvement of student learning and institutional effectiveness. Four clusters of characteristics are examined in the matrix: institutional culture, shared responsibility, institutional support, and efficacy of assessment. For each cluster, three general patterns and associated institutional characteristics are defined: beginning implementation of assessment programs, making progress in implementing assessment programs, and maturing stages of continuous improvement. The Commission notes that the patterns of the characteristics are fluid and nondeterministic. That is, an institution's assessment program may display characteristics from more than one pattern and will not necessarily progress through every characteristic before it becomes an effective continuous improvement mechanism. The matrix is accompanied by an analysis worksheet to rate the implementation of the assessment program in each pattern area on a scale of 1 to 9, and to provide evidence or rationale of this rating.

Data Sources

Van de Ven and Poole (2005) note that significant events in the process study approach to organizational change are determined by the observer rather than a uniform quantifiable measure. This study will consult institutional strategic plans and assessment and accreditation reports published since 1995 to retell the story of the institution as it presents itself to accreditation agencies and the larger community. These plans and reports include results from institutional studies, for example, surveys and interviews conducted as part of the most recent institutional accreditation self-study in 2005. The analysis is restricted to reports produced by institutional level offices or committees, including now defunct and current offices in charge of continuous quality improvement, institutional research, and assessment. Thus, these reports can be seen as the most comprehensive and reliable sources of data on significant events as perceived by the institution.

Data Analysis

A narrative account of significant events for each of the four clusters of characteristics defined by the Assessment Culture Matrix was prepared by examining institutional assessment and accreditation reports published since 1995. The narratives cross-reference one another given that the clusters of characteristics are not mutually exclusive. Using the patterns of characteristics as a reference, we determined our approximate location on the continuum of assessment implementation among the three patterns expressed by the Higher Learning Commission (2003). The analysis is intentionally descriptive and avoids studies of variance or causal interpretations.

Making the Shift to an Assessment Culture

Frequent changes in institutional leadership have played a significant role in the progress to institutionalize an assessment culture at UPRM (UPRM, 2001). Since 1996, five different chancellors have led UPRM, four of those in the period between 1996 and 2002. Leadership changes have had a demonstrable effect on each of the four clusters of characteristics, and thus, feature prominently in each of the narratives.

Institutional Culture

At UPRM, the shared understanding of the purposes, advantages, and limitations of assessment has fluctuated significantly over the past ten years. Shared understandings are explicitly and publicly expressed through mission and goal statements published as part of strategic and assessment plans and institutional reports. A truer picture of the extent to which these understandings are lived by the campus can be gleaned from the examination of important events during the time period that shaped the creation or revision of institutional mission and plans. The timeframe is divided into three parts, coinciding with important events in the development of an assessment culture: 1996-2001, 2001-2005, and 2005-present.

1996-2001. Feedback from the MSCHE after the accreditation visit of 1995 prompted the first chancellor to lead the development of the institution's first strategic plan (UPRM, 1997) and the establishment of an office dedicated to quality assurance. The institutional mission and goals set out in the strategic plan clearly put students at the center and presented a profile of graduating students emphasizing both general education and professional preparation. The plan specifically mentioned the development of assessment methodologies to determine attainment of student learning objectives and goals as a key strategy to implement programs and services that put students at the center. The Office of Quality Improvement and Innovation (OMIC) was opened in 1996. By the third year of its operation, various improvement and innovation teams had completed projects in academic affairs (e.g., admissions, enrollment), administration (e.g., human resources, acquisitions), and student affairs (e.g., attendance lists required for federal funding) (UPRM-OMIC, 1999). The office's 1999 progress report described the

implementation of total quality at UPRM as “mature” across six components: recognition, dissemination, evaluation and control, improvement and innovation, education, and direction. The office survived the brief tenure of the second chancellor, who was replaced within three months of his appointment. The third chancellor did not assign funds to OMIC and it was closed. This event dealt a huge blow to the culture that had been developing and generated mistrust of the administration and the assessment process itself (UPRM-MSCHE, 2005). In 2001, under the fourth chancellor, an Office of Institutional Research and Planning (OIIP) was opened to encompass institutional research, strategic planning, and physical planning with the aid of a federal Title V grant for Hispanic-serving institutions (UPRM, 2001).

2001-2005. In the years between 2001 and 2005, a sense of shared understandings about the purposes of assessment was renewed. As part of its ABET re-accreditation efforts in 2001, the College of Engineering established a permanent assessment office (System for the Evaluation of Education – SEED). All programs received accreditation and the visiting team praised the efforts of the college to introduce an outcomes-based assessment culture (UPRM-MSCHE Steering Team, 2005). A fifth chancellor appointed in 2002 supported the solidification and expansion of the OIIP and launched a two-year initiative in 2003 called the Continuous Improvement Education Initiative (CIEI). The *2005 UPRM-MSCHE Self-Study Report* (UPRM-MSCHE Steering Team, 2005) labeled the launch of the CIEI as a “commitment to change” demonstrating that improvement had become a “visible and primary goal of the institutional leadership.” (p. 11) Stemming from the review of the PRR2000, the institution was required to submit a follow up report in 2003 to document the development and implementation of a comprehensive outcomes assessment plan including student learning outcomes. The steering team for the 2005 MSCHE self-study was carefully chosen to include individuals familiar with outcomes-based assessment in response to new outcomes-based accreditation criteria from MSCHE (2002), including the appointment of the coordinator of the 2002 ABET accreditation efforts as the coordinator of the 2005 MSCHE Steering Team. One of the initial activities of the steering team was to create the institutional assessment plans for student learning and institutional effectiveness (UPRM-MSCHE Steering Team, 2003a; 2003b) in a very short timeframe (February to August 2003) and to revise the institutional strategic plan (UPRM, 2004).

The institutional student learning assessment plan set out nine institutional student learning outcomes along with a methodology and template for academic departments to develop their own assessment plans. The UPRM Academic Senate approved the plan and the student learning outcomes, and further, issued a certification that student learning assessment plans must be submitted for the approval of all program revisions and any new courses or programs. Methodologies to assess the institutional student learning outcomes were not developed at this time. When the results of the MSCHE self-study were compiled in late 2004, over half of the academic departments had developed student learning outcomes, and by the time of the self-study visit, 29 departments and programs had developed assessment plans. The focus at this point in time was on degree-granting programs affiliated with the four academic colleges, and thus, did not include academic programs under the Dean of Academic Affairs and Dean of Students. 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 (MSCHE, 2005).

The assessment plan for institutional effectiveness emphasized the close linkages between the assessment and strategic planning processes, with the recommendation that units use the new strategic plan template as an assessment plan (UPRM-MSCHE Steering Team, 2003b). At the time of the preparation of the self-study report, 60% of units did not have an approved assessment plan in place, and 44% indicated they were unaware of their effectiveness in providing services (UPRM-MSCHE Steering Team, 2005).

The revised 2004 strategic plan included minimal revisions to the mission and vision of the institution. A statement of 11 values was added, and the goals were modified into eight critical areas, with corresponding strategic areas and specific strategies. The critical areas are similar to the strategic goals expressed in the 1997 plan, but with a new emphasis on leadership and the role of continuous

quality improvement, both for student learning and efficiency and effectiveness of services and administrative processes. The strategic plans for all four colleges, major administrative units, and academic and administrative departments were revised to align with the new strategic plan. A standardized system was created to ensure that strategic plans would be aligned with operational plans, and the institutional annual reporting process was modified to align with the established goals and objectives of the strategic plan (UPRM-MSCHE Steering Team, 2005).

The results of surveys of faculty, students, and staff by the UPRM-MSCHE Steering Team in 2004 as part of the self-study efforts reveal a snapshot of the assessment culture at that point in time (UPRM-MSCHE Steering Team, 2005). About one-fifth of all faculty members (n=206) and one-third of staff members (n=630) completed the survey. A stratified, representative sample of about 1,000 students participated in the student version. Across all three surveys, over 60% of respondents agreed with statements that an environment of assessment and continuous improvement existed at UPRM (p. 61). However, more than 85% of respondents to surveys and structured questionnaires agreed that the institution's assessment process could be improved (p. 63). Based on this and other findings, a key recommendation of the UPRM-MSCHE Steering Team was to formalize CIEI as part of the structure of institutional research and planning.

2005-present. 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, including the need to establish a group or committee with formal responsibility for coordinating the ongoing, disciplinary assessment efforts of the colleges (MSCHE, 2005). In September 2005, the Office of Continuous Improvement and Assessment (Oficina de Mejoramiento Continuo y Avalúo – OMCA) was created as a unit under the Chancellor's office.

OMCA has been able to continue the momentum that began with the 2005 MSCHE self-study and solidify those efforts into an assessment program, as described in its recent monitoring report to MSCHE (UPRM-OMCA, 2007). A major recommendation of the 2005 MSCHE Evaluation Team, enforced by the requirement of a monitoring report by April 2007, was the implementation of its institutional assessment plans by way of mission-aligned assessment projects completed by each academic and administrative unit. In early 2006, OMCA instituted a requirement that both administrative and academic units submit annual reports describing at least one assessment cycle completed during the academic year. By the end of March 2006, each unit (115 in total) had developed an administrative 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, 29 academic departments and programs 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) academic programs under the Office of Dean of Academic Affairs which had not previously participated in the assessment process. Guidelines for the implementation of distance learning programs will be evaluated in 2007, increasing the reach of the assessment program to this growing educational method at the institution. Additionally, the first general education assessment plan for the institution was approved in February 2007 as an annex to the existing student learning assessment plan (UPRM-OMCA General Education Assessment Task Force, 2007).

In addition to the formalization of an assessment reporting process, OMCA has begun steps to implement the seven criteria for performance excellence espoused by the Baldrige National Quality Program (National Institute of Standards and Technology (NIST), 2006) as indicators of institutional effectiveness. The Baldrige program has developed a survey (Are We Making Progress?), available in English and Spanish, to assess perception gaps among senior leaders and employees on each of the seven criteria. OMCA is in the process of administering the survey to faculty and staff. All senior administrative leaders and most department directors were surveyed in summer 2006 (Sharma & Dika, 2006). Over 70% of deans and directors indicated that employees know the organizational mission, the

relevant parts of institutional plans, and how to measure the quality of their work. Fewer than 40% of these leaders indicated that employees know how measures used in their work fit into overall measures of improvement, get information they need to know how institution is doing, can make changes that will improve their work, and can get everything they need to do their jobs. Based on the responses from employees (faculty and staff) received to date (n=171 on February 15, 2007), some of the perceptions of the leadership are not supported. Participating employees indicate high agreement with statements that they know the institution's mission (83%) and how to measure the quality of their work (88%), but fewer than half agree that they know the parts of the institution's plans that affect their work (47%). Like the senior leaders and directors, employees express low agreement that they can get everything they need to do their jobs (42%) or get the information they need about the institution (39%), but they indicate higher agreement that they know about how their work measures fit into overall improvement measures (64%) and can make changes that will improve their work (74%). It is too early to draw conclusions from these data given the small sample of employees. However, the data suggest that the shared understanding about the purposes and advantages of assessment has not fully matured.

The pattern of characteristics in institutional culture at UPRM most closely conforms to the "making progress" stage on the continuum of assessment implementation. While some of the characteristics of the assessment implementation are in more mature stages, particularly the focus of the mission and goals on student learning, others have progressed in fits and starts with the changing leadership of this time frame.

Shared Responsibility

The Assessment Culture Matrix differentiates three groups that share responsibility for assessment implementation; faculty, administration, and students. The nature of the responsibility for assessment implementation naturally differs among the groups. The description of key events in the participation of each group in the assessment implementation process offers a way to look at the relative opportunities for participation and the contributions of each group.

Faculty. The faculty has played a primary role in the implementation of assessment at UPRM, both through traditional structures like curriculum committees and the academic senate, but also in the creation of new structures for institutional research and continuous improvement (UPRM, 2001; UPRM-MSCHE Steering Team, 2005; UPRM-OMCA, 2007). When the Offices of Quality Improvement and Innovation (OMIC), Institutional Research and Planning (OIIP), and Continuous Improvement and Assessment (OMCA) were opened, a faculty member was appointed to lead the office in each case. When the efforts for the 2005 MSCHE self-study were started in 2002, financial support was provided by the institution for over 100 faculty members to participate in intensive assessment institutes and workshops offered by Penn State University. Faculty-led workshops on outcomes assessment were developed and offered to increase assessment knowledge and practice within the academic departments.

During the 2005 UPRM-MSCHE self-study, deans and department heads named faculty members as assessment coordinators to lead assessment efforts in their units. The UPRM Academic Senate expressed its endorsement of the student learning assessment plan in 2003 (UPRM-MSCHE Steering Team, 2003a), and further acted to institutionalize assessment of student learning with the issuance of the certification requiring student learning assessment plans for all course and program revision or creation petitions in 2004. When the OMCA Academic Assessment Steering Team was created in 2005, the college assessment coordinators were naturally named to serve. A representative faculty team assisted OMCA in the development of a feedback rubric for the student learning assessment plans and reports in June 2006. The review of the assessment plans and reports in August 2006, using the rubric, was conducted by an eight-member faculty committee.

The reviews of the assessment reports from 2006 reveal that the majority of assessment projects completed (55%) could be classified as classroom assessment; one faculty member within his or her classroom (UPRM-OMCA, 2007). Three of the four colleges have had at least one loop-closing activity

since 2005. There have been numerous faculty-led assessment workshops and training activities, demonstrating the leadership of this group in assessment efforts. Preliminary results of the ongoing Baldrige survey provide some support to the notion of faculty responsibility in assessment implementation. Of 96 faculty respondents, at least 90% agree that they know how to measure and analyze the quality of their work to see whether changes are needed, and 86% agree they use the analyses to make decisions. The majority (79%) agree that they collect data about the quality of their work. Overall, the faculty is clearly making significant progress in the implementation of continuous improvement, but the participation of the individual colleges in these efforts has not been even.

Administration. The support of the executive officers of the institution for the assessment program has varied with institutional leadership, as described in the previous section on institutional culture. The current administration (2002- present); specifically the Chancellor, the Dean of Academic Affairs, and the deans of the colleges; has emphasized the value of the assessment program in written and verbal communication. As part of the CIEI and 2005 MSCHE self-study efforts, the Chancellor issued public statements and prepared letters encouraging campus community members to participate in the study's surveys, questionnaires, and interviews (UPRM-MSCHE Steering Team, 2005). Each department and college submits an annual report to the Chancellor aligned to report progress related to the institution's strategic plan, and this is formalized into an institutional annual report.

While engineering already had a college-level assessment office, the Dean of Arts & Sciences created a new position for an Associate Dean of Assessment and Learning Technologies in 2003. The deans of the Colleges of Agricultural Sciences and Business Administration appointed college assessment coordinators that same year. Deans and department directors provide release time or extra compensation to most of the assessment coordinators at the college and departmental levels, demonstrating a widespread commitment to the assessment program.

The establishment of OMCA in 2005 represented a formal commitment of institutional resources to the assessment program. OMCA published its first annual report in November 2006 (UPRM-OMCA, 2006b) to summarize institutional progress on the implementation of continuous improvement. The administration has entrusted OMCA to develop assessment processes and procedures for public recognition of assessment efforts, but has publicly supported those efforts through the issuance of campus-wide memos and press releases congratulating units on best practices (UPRM-OMCA, 2007). The Dean of Academic Affairs named a task force to develop a general education assessment plan, and has recently committed to the implementation of this plan and its required structures with the endorsement of the Chancellor (UPRM-OMCA, 2007). The administration has also demonstrated its commitment to improvement through the implementation of a process to help directors estimate their personnel effort and corresponding budget for each of the strategic plan's critical areas, strategies, and strategic areas (UPRM-OMCA, 2007). These recent events point to a maturing of the responsibility of the administration for assessment implementation, but it is too soon to tell whether the progress will be sustained given a leadership change.

Students. There has been limited student participation in past assessment efforts, primarily within the task forces for institutional accreditation self-studies. While over 60% of students agreed on the existence of an environment of assessment and continuous improvement at UPRM in 2004, there is a notable absence of significant events in the involvement of students in the assessment program. Neither of the existing institutional assessment committees have a student member. The institution is still developing effective mechanisms for communicating expectations and student learning outcomes to students. While the institutional student learning outcomes were approved by the faculty and administration in 2003, they were not publicized in the UPRM undergraduate catalogue until 2006-07 and were not prominently featured on the UPRM web site (UPRM-OMCA, 2007). Publicity of departmental student learning outcomes has been more widespread; about 80% of academic units have publicized their mission and outcomes through the catalogue and the web, while the units in engineering and business administration have posted these items in hallways and classrooms.

The institution has committed to the improvement of student engagement through its participation in the Building Engagement and Attainment of Minority Students (BEAMS) program (UPRM-MSCHE Steering Team, 2005). The program involves the administration of the National Survey of Student Engagement (NSSE) to first-year students and graduating students, and the implementation of an action plan to improve areas for improvement identified by the NSSE results (see <http://oiip.uprm.edu/beams.html>). The BEAMS Project Team includes one student representative from each academic college. Ideally, these student representatives could play a heightened role in increasing student awareness of institutional student learning outcomes and the institutional assessment processes in place to ensure students are attaining them.

Currently, the responsibility for the implementation of the assessment program is imbalanced, with significantly greater participation of faculty, a high level of stated support of the administration, but few opportunities for student participation. With greater involvement of students, the implementation of the assessment program would move from the “making progress” stage to the “maturing” stage.

Institutional Support

Institutional support in the form of resources and structures are differentiated in the Assessment Culture Matrix. As indicated in the description in the previous section on institutional culture, resources and structures for assessment implementation were not consistently supported and reflected the orientations of the particular leaders rather than an overriding commitment to the mission and strategic plan of the institution. An analysis of the events during the current administration (2002 to present) is more instructive to determine our progress and current location on the implementation continuum.

The resources and structures allocated to the CIEI from 2003 to 2005 were done so, in a large part, to ensure the effective completion of the MSCHE self-study. The CIEI had an institutional budget, and the coordinator of the UPRM-MSCHE Steering Team was able to generate additional funds from these efforts from global (GM, Hewlett Packard) and local corporations. Faculty members serving on the steering team received extra compensation from the institution for this service. However, the existence of the CIEI created some confusion about its relationship with OIIP in terms of institutional assessment (UPRM-MSCHE Steering Team, 2005).

Institutional support for assessment was cemented with the creation of OMCA in 2005 as a separate office from OIIP, as previously stated. The coordinator for the ABET and MSCHE accreditation efforts was named as the director, and the secretary of the UPRM-MSCHE Steering Team moved into a similar role for the new OMCA. Two steering teams, academic and administrative, and a select group of advisors were appointed by the director in consultation with the Chancellor. Team members were chosen on the basis of past performance in institutional and engineering accreditation efforts, at the same time ensuring that all academic colleges and administrative units were well represented, including OIIP (Sharma & Dika, 2006). In April 2006, the office contracted an assessment specialist on a full-time, temporary basis to ensure the office a greater ability to meet its stated responsibilities.

Essentially, the budget assigned to OMCA covers the additional compensation to the director beyond regular faculty salary, the salary of the secretary, and basic materials and office supplies. While some additional compensation was available for steering team members in the first year using external funds developed for CIEI, no compensations were provided in 2006-07. The salary for the assessment specialist, a temporary position, does not represent a recurring budget allocation to the office. A fiscal crisis in the local government in the spring of 2006 caused widespread panic, spending cutbacks, and the closure of the island’s K-12 public education system for nearly two weeks. OMCA has been able to offer additional professional development to its staff and some steering team members primarily through external funds generated to support the implementation of the Baldrige criteria (UPRM-OMCA, 2006).

Under OMCA, sound organizational structures and implementation calendars have been developed to advance the assessment and improvement program. The budgetary commitment of the

institution to personnel salaries is a significant step forward. Without a more permanent financial commitment to support staff or steering team members with particular expertise in assessment, funds for workshops and professional development, and award funding for departmental initiatives, the implementation of the assessment program could be affected. We are definitely making progress, but not yet mature in institutional support of the assessment program.

Efficacy of Assessment

Has a “culture of evidence” emerged on our campus? Are data being used to improve student learning and administrative processes?

As interest and motivation to participate in the assessment program was growing across the institution in early 2006, the OMCA staff recognized the need to be able to provide timely feedback to units on their assessment plans and reports (UPRM-OMCA, 2007). Members of the steering teams echoed this concern, citing previous experiences where reports for different initiatives were submitted, only to be filed away without further comment. An opportunity to develop an assessment mechanism for the assessment processes 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.

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) (UPRM-OMCA, 2006a). The rubric criteria were adapted from Jones (2006) and the performance levels from Suskie (2004). The rubric for student learning assessment led naturally to a rubric for administrative assessment efforts. The key elements of the administrative rubric mirror those of the academic one, with the substitution of responsibilities and services for learning outcomes. The criteria for the elements follow directly from the assessment plan template, creating a transparency of expectations related to assessment efforts. The results of the review of plans and reports in 2006 and 2007 were chronicled in the recent monitoring report to MSCHE (UPRM-OMCA, 2007). They are reported herein to describe academic efficacy and administrative efficacy.

Academic efficacy. Of the 29 plans submitted in 2005, most (66%) met the specified criteria for mission while less than half (41%) met the criteria for learning outcomes. Only 21% of the plans met the criteria specified for assessment methods. Two criteria were attained by all plans – identification of mission and identification of department/program learning outcomes. Nearly all plans (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 in the fewest number of plans 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 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 the one of only four plans to do so. The other plans attaining all criteria were agricultural education, civil engineering, and physical education.

Reports from the first official cycle of student learning assessment projects were given a deadline of June 15, 2006 for submission. By August 2006, all units from the Colleges of Arts & Sciences, Business Administration, and Engineering had submitted reports; however, only two departments from Agricultural Sciences 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 units achieved Best Practice. Among the units meeting all criteria for the assessment reports were all 13 departments of Arts & Sciences along with Industrial Engineering.

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 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 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 results are used for strategic or assessment planning.

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. 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). Within the indirect methods used, the most common was course evaluation (5), followed by student survey or questionnaire (4). Five projects used indirect methods only, while the other 17 used direct methods or a combination of direct and indirect methods.

Administrative efficacy. The overall quality of administrative assessment plans increased from 2006 to 2007 based on the review of the respective plans using the rubric earlier mentioned. The percentage of units which met all criteria for responsibilities/services and assessment methods increased by 31% and 29%, respectively. Of units who received opportunity for improvement (OFI) ratings in 2006, all demonstrated improvement in the category of mission and 84% improved in the specification of responsibilities and services for 2007. For assessment methods, only 40% of units with opportunities for improvement showed improved performance; 11% to Meets Standard and 29% to Best Practice.

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. 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 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 projects conducted by the units consisted of 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 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 were focused on the improvement of an administrative process.

Summary. Based on the results of the reviews of assessment plans and reports, UPRM is making progress on developing a culture of evidence but not yet consistently making decisions and allocating resources based on assessment data. The assessment reports show that some units have still not completed an assessment cycle, nearly two years after the MSCHE recommendation to complete at least one assessment cycle annually.

Summary and Implications

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. Across the narratives for institutional culture, shared responsibility, institutional support, and efficacy of assessment, the influence of accreditation requirements on the progress to implement an assessment program at UPRM is plain. Changes in institutional leadership prevented much progress from being made between the 1995 MSCHE self-study and the 2000 Periodic Review Report, and this was duly noted by MSCHE in its response to the PRR2000. The creation of the first institutional assessment plans for student learning, general education, and institutional effectiveness, as well as the revision of the strategic plan, were motivated out of requirements to report implementation progress to MSCHE.

In contrast to the experiences of the late 1990s, the institution has seen a sustained emphasis and commitment to the implementation of an assessment program in the past five years. The changed accreditation criteria, emphasizing outcomes-based assessment, are clearly a factor. However, the initiative to develop mechanisms to provide feedback to units, resulting in concrete ways to describe levels of implementation, and the commitment to the Baldrige criteria for excellence in education suggest a movement beyond compliance to a growing understanding, valuing, and practice of continuous improvement through assessment.

While the UPRM operates in a unique context compared to other higher education institutions in the Caribbean, the experience of the implementation of the institutional assessment program reveals some important lessons.

- In environments with political instability or top-down management tendencies, an assessment program might best be implemented by involvement of faculty combined with some external motivation. The shared responsibility and involvement of the faculty at UPRM appears to have contributed to keeping the embers of assessment burning when a lack of institutional support or value was given to this process. The rewards of regional accreditation are tangible enough (i.e., access to funding) that a complete abandonment of a continuous improvement focus is highly unlikely.
- Student learning assessment starts with a few individuals, at the classroom level. The same can be said of administrative assessment, at the office level. Begin with those on board and do not wait for 100% buy-in to begin.

- The development of institutional feedback mechanisms (rubrics) for assessment plans and reports increases the utility of the assessment program to support actual improvement of learning or administrative processes. We know that students learn from feedback; why wouldn't the institution learn from feedback on its assessment efforts? The feedback process also positions the assessment office or committee in a facilitating role rather than a monitoring one, increasing trust and participation.

In closing, the journey to a full implementation of an assessment culture is an individual one, and will vary based on factors including the four clusters of characteristics examined in this paper. Shulman (2007), the current president of the Carnegie Foundation for the Advancement of Teaching, cautions that institutions must take control of the accountability narrative and tell the stories that are most important to our stakeholders. Self-study activities like those required for accreditation represent an opportunity for institutions to be self-reflective and learn from accreditation (Cistone & Bashford, 2002; Wergin, 2005) rather than waste scarce institutional resources simply to comply with requirements and begin again with each new accreditation cycle.

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