

Making Progress: Perceptions of Organizational Performance Based on the Baldrige Criteria for Performance Excellence

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Purpose

During the past 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 focus of accreditation in the US has shifted during this time period from inputs to student learning outcomes, and aims to be a catalyst for institutional self-reflection, learning, and improvement (Wergin, 2005). For institutions to move from a culture of compliance to one of continuous improvement, they must adopt effectiveness criteria which make sense in light of institutional mission and goals.

This paper presents the case study of the approach of one institution - University of Puerto Rico-Mayaguez - to adopt the Baldrige National Quality Program's (BNQP) Education Criteria for Performance Excellence (NIST, 2006) as indicators of institutional effectiveness. The BNQP has developed the assessment tool "Are We Making Progress?" (AWMP) to determine gaps in perceptions among leaders and employees and to identify opportunities for improvement. The administration of this tool is seen as an important initial step in embarking on a continuous improvement process based on the Baldrige criteria. The paper presents the results of a recent administration of the AWMP tool, comparing the perceptions of senior leaders with those of employees, and the perceptions of three employee groups – directors, staff, and faculty – with one another. The results provide valuable information on perceived areas of strength and opportunities for improvement. The benefits of use of the AWMP tool as a measure of institutional continuous improvement are discussed.

Conceptual Framework

The Continuous Improvement (CI) Model of the University of Puerto Rico-Mayaguez (UPRM) is displayed graphically in Figure 1.

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Figure 1. UPRM Continuous Improvement Model

The model depicts a systemic view of the institution's continuous improvement process in the context of internal and external standards and indicators.

- The continuous improvement process is at the center of the model. The four major elements of the process are strategic planning; institutional research; assessment; and improvement actions. The elements are linked by arrows to indicate the cyclical, spiraling nature of continuous improvement.
- Internal (institutional) standards and indicators provide the basis for metrics of improvement in key areas of interest to the institution. Institutional indicators, tied to the institution's strategic plan, and the institutional student learning outcomes represent our internal quality standards against which we examine the effectiveness of student learning and administrative processes and services.
- External criteria represent important guidelines for the institution to assure its accreditation and the alignment of its processes with internationally-recognized standards of educational excellence. The Middle States Commission on Higher Education (MSCHE) Standards of Accreditation provide guidelines for institutional self-review related to accreditation processes. The Baldrige Educational Criteria for Performance Excellence serve as an additional, complementary framework for institutional self-assessment.

Methodology

Instrumentation

The two AWMP instruments were modified slightly for use with the UPRM population. Spanish and English versions of the employee instrument were used for unit directors,

faculty, and staff². The questionnaire for senior leaders³ was translated to Spanish by OMCA staff using the employee version to ensure equivalent terminology. Minor modifications were made to substitute language more specific to the higher education context, e.g., institution instead of organization, and the questionnaire sections (categories) were changed to match those used for the Baldrige Education Criteria for Performance Excellence (NIST, 2006). Some demographic items were added to gather information on sex, position/status, dean's unit (employees only), and number of years employed at the institution.

Table 1 displays the number of items per category for both instruments. The exact items administered to leaders and employees will be made available in the final paper. Leaders are asked questions about "our employees" and employees are asked to give personal opinions (i.e., I know my institution's mission). All items are scored on a five point Likert-type scale from 1=strongly disagree to 5=strongly agree.

Table 1. "Are We Making Progress?" Items per Baldrige Category

Are We Making Progress? – ¿Estamos Progresando?	Number of Items
Category 1: Leadership	7
Category 2: Strategic Planning	3
Category 3: Student, Stakeholder, and Market Focus	5
Category 4: Measurement, Analysis, and Knowledge Management	6
Category 5: Faculty and Staff Focus	6
Category 6: Process Management	4
Category 7: Results	9
TOTAL	40

Administration

The questionnaire administration occurred in three distinct phases. From May to June 2006, Spanish questionnaires for senior leaders and employees were administered to senior leaders and directors. Senior leaders were given a verbal invitation at an Administrative Board meeting, followed by an e-mail, while directors were invited to participate via e-mail. This phase was used as a pilot study.

The online administration period for faculty and staff took place from November 2006 to February 2007. All employees were invited to participate in the online questionnaire via e-mail. The questionnaire web site included both English and Spanish versions of the instrument to allow employee participants to select their language of preference.

The third administration phase, in March 2007, utilized a paper version of the Spanish questionnaire. Copies of the questionnaire and computer answer sheets were distributed

² Directors: Directors of academic and non-academic units; Assistant and Associate Deans
Faculty: Full-time and part-time instructional, research, and public service personnel, including counseling and library personnel classified as faculty
Staff: Full-time and part-time non-instructional personnel, including clerical, technical, maintenance, and skilled crafts personnel

³ Leaders: Chancellor, Deans of Academic Affairs, Administration, Agricultural Sciences, Arts & Sciences, Business Administration, Engineering, and Students; Director of Research & Development Center

to particular unit and sub-unit directors in the Physical Plant (Dean of Administration) in which employees do not use or have access to computers.

Participants

Seven of nine senior leaders participated in the leaders' questionnaire, for a response rate of 78%. Demographic data are not reported due to the small sample size.

A total of 382 employees responded to the employee questionnaire. The breakdown of participants by group included 59% staff, 26% faculty, and 15% directors. Employee representation by group ranged from a high of 76% for directors to 10% for faculty. The participants in the employee questionnaire are primarily male (65%), from administrative units (58%), and have been employed ten or more years at the institution (58%). A significant proportion of the participants come from the offices of the Dean of Administration (40%).

Data Analysis and Interpretation of Results

Descriptive statistics; including means, standard deviations, and frequencies; were computed for all items on both questionnaires using Microsoft Excel and Minitab 15 statistical software. The number of responses by item varies slightly, and not all cumulative frequencies add to 100% due to rounding.

The results of the questionnaires are presented as comparisons of item means (averages). The average rating (from 1 to 5) for each item can be interpreted in the following manner to facilitate discussion and utilization of the results:

Range	Rating
1.00 – 1.49	Strongly Disagree
1.50 – 2.49	Disagree
2.50 – 3.49	Neither Agree nor Disagree
3.50 – 4.49	Agree
4.50 – 5.00	Strongly Agree

The ranges for strongly disagree and strongly agree are smaller due to the floor and ceiling effects of the scale.

The responses of employees and leaders are not compared statistically due to the small sample size of the senior leader group (N=7). A difference of 0.50 points or higher between item means was chosen as a criterion to identify perception gaps between these groups. To compare the responses of the three employee groups, Analysis of Variance (ANOVA) was tabulated for each item on the employee questionnaire using Minitab 15. Effect sizes are also presented to aid in the interpretation of the results.

Results

Strengths

Among employees and senior leaders, employee knowledge of and contact with customers emerged as a commonly perceived strength (average rating of 4.00 or higher). Among the three employee groups, the perceived strength areas include employee knowledge about how to measure the quality of their work, analysis of quality to determine if changes are needed, and decision-making based on analysis. Employees also indicate that their clients are satisfied with their work.

Strengths perceived by each of the participant groups showed some variation. Senior leaders rated sixteen (16) items as strengths, including five in Leadership; four in Student, Stakeholder, and Market Focus; and none in Process Management. Directors rated eighteen (18) items as strengths, including five in Student, Stakeholder, and Market Focus; five in Results; and none in Process Management. Faculty members rated nine (9) items as strengths, including four in Student, Stakeholder, and Market Focus and three in Measurement, Analysis and Knowledge Management; but none in Leadership, Strategic Planning, Faculty and Staff Focus or Process Management. Staff members rated six (6) items as strengths, including three in Measurement, Analysis and Knowledge Management and two in Results; but none in Leadership, Strategic Planning, Faculty and Staff Focus or Process Management

Overall, three categories demonstrated perceived strengths across all groups: Student, Stakeholder, and Market Focus; Measurement, Analysis, and Knowledge Management; and Results (employee role).

Opportunities for Improvement

Leaders and employers agreed that employee knowledge about how well the institution is doing financially and the institution's role in removing things that get in the way of progress could be improved (average rating of 3.49 or lower).

Among the employee groups, faculty and staff indicated lower agreement that "As it plans for the future, the institution asks for employees' ideas."

The opportunities for improvement as perceived by each participant group were varied. Senior leaders rated ten (10) items as opportunities for improvement, including three each in Measurement, Analysis, and Knowledge Management; Process Management; and Results. Directors rated five (5) items as opportunities for improvement, including two within Leadership, and one each within Strategic Planning, Process Management, and Results. Faculty members rated sixteen (16) items as opportunities for improvement, including four within Leadership, three each within Strategic Planning and Process Management, and two each within Measurement, Analysis, and Knowledge Management; Faculty and Staff Focus; and Results. Staff members rated eighteen (18) items as opportunities for improvement, including six within Results, three within Strategic Planning, and two each within Measurement, Analysis, and Knowledge Management; Faculty and Staff Focus; Process Management; and Results.

Three categories can be considered as overall areas for improvement: Leadership, Process Management, and Results (institutional role).

Perception Gaps

Among leaders and employees, leaders were more positive in three areas (difference of 0.50 or higher from employee mean):

- Provision of information and resources to employees
- Employee opportunities for input into planning and professional/job skill development
- Institutional adherence to regulations and standards

Employees expressed more positive perceptions than leaders in three areas (difference of 0.50 or higher from leader mean):

- Employee knowledge and use of measurement, analysis, and knowledge management practices
- Quality of employee work products
- Employee job satisfaction

Among employee groups, significant pairwise differences at $p < .05$ level were examined. The greatest differences in perception were within Leadership category, followed by Student, Stakeholder, and Market Focus; Process Management; Faculty and Staff Focus; and Results. Few differences in perceptions were seen within the Measurement, Analysis, and Knowledge Management category. In general, directors have the most positive perceptions across all categories, followed by faculty, then staff members.

Discussion and Significance of the Study

The AWMP tool provides a way to begin implementing the Baldrige criteria as indicators of educational excellence in higher education. The comparison of perceptions of leaders with employees (faculty and staff) efficiently reveals areas for improvement and creates openings for conversations to occur. The Baldrige Criteria for Educational Excellence represent the vanguard of educational quality in the United States, and any institution could easily conduct the AWMP as part of its institutional assessment and improvement efforts.

References

- Eaton, J. S. (2006). *An overview of U.S. accreditation*. Washington, DC: Council for Higher Education Accreditation.
- Eaton, J. S. (2003). *The value of accreditation: Four pivotal roles*. Washington, DC: Council for Higher Education Accreditation.
- El-Khawas, E. (2001). *Accreditation in the USA: Origins, developments, and future prospects*. Paris: UNESCO International Institute for Educational Planning.
- National Institute of Standards and Technology (NIST). (2006). *Baldrige National Quality Program education criteria for performance excellence*. Gaithersburg, MD: Author.
- Wergin, J. F. (2005). Taking responsibility for student learning: The role of accreditation. *Change*, (January/February), 30-33.