Evaluating the impact of organizational self-assessment in higher education: the Malcolm Baldrige/Excellence in Higher Education framework

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Abstract
Purpose - The purpose of this paper is to summarize a series of studies conducted by the Center for Organizational Development and Leadership at Rutgers University from 2006-2005. Motivating these studies is the recognition that organizational self-assessment programs, such as the Malcolm Baldrige program, have achieved prominence and popularity. The paper seeks to focus on the value of the Baldrige program, and, more specifically, the impact of the Excellence in Higher Education (EHE) approach, an adaptation of the Malcolm Baldrige framework tailored specifically for colleges and universities.

Design/methodology/approach - This paper reports on a two-phase investigation of six independent university departments that participated in separate Baldrige/EHE assessment workshops. Through a web-based survey and in-person interviews we were interested to discover participants' perceptions of the assessment process, the extent of knowledge acquisition, and extent of organizational change.

Findings - Findings suggest that self-assessment does result in the acquisition of a knowledge and theory base, and leads to the identification of strengths and improvement needs. Results also indicate that in a majority of the departments, the assessment program initiated a genuine commitment to organizational change, one that led to a number of tangible improvements.

Originality/value - Enhancing our understanding of the relationship between knowledge acquisition and change is one of the most fundamental and enduring pursuits of social science – one that is absolutely central to organizational development. This study provides an empirical investigation of how these dynamics operate during organizational self-assessment, an increasingly popular leadership tool for advancing institutions of all kinds.

Keywords Self assessment, Higher education, Baldrige Award

Paper type Research paper

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Introduction
There is general agreement among organizational development professionals that organizational self-assessment is a very valuable activity. Assessment is viewed as providing an opportunity for individuals and workgroups to step back from daily activities and reflect on their organization in terms of strengths and areas for improvement (Ruben, 2005a; Pool, 2000; Schraeder, 2004). This process is also useful in creating a common language and analytic framework, establishing improvement priorities, and providing a foundation and impetus for effective strategic planning and organizational change (Ruben, 2004).

Of the various approaches to organizational assessment, none has become more influential than the Malcolm Baldrige model (Baldrige, 2006). The Malcolm Baldrige National Quality Award Program (MBNQA) was established by the United States Congress in 1987. Named after Secretary of Commerce Malcolm Baldrige, who served from 1981 until his death in 1987, the intent of the program is to promote US business effectiveness for the advancement of the national economy by providing a systems approach for organizational assessment and improvement. More specifically, the goals of the program are:

- identify the essential components of organizational excellence;
- recognize organizations that demonstrate these characteristics;
- promote information sharing by exemplary organizations; and
- encourage the adoption of effective organizational principles and practices.

The program, which is administered by the US National Institute for Standards and Technology (NIST), has also been influential in national and international efforts to identify and encourage the application of core principles of organizational excellence. The number of state, local and regional award programs based on the Baldrige increased from eight programs in 1991 to 43 programs in 1999 (Calhoun, 2002; Vokurka, 2001), and by 1991, over 25 different countries had used the Baldrige criteria as the basis for their own national award (Przasnyski and Tai, 2002). Subsequently, this number has increased to over sixty national awards in other countries (Vokurka, 2001). One example is the European Foundation Quality Model (EFQM, 2006).

The Baldrige framework
The Baldrige framework, shown in Figure 1, covers seven categories. Although the language and definitions used to describe the framework have changed over the years and vary somewhat from sector to sector, the seven basic themes are constant. In general terms, the framework suggests that organizational excellence requires:

1. Effective leadership that provides guidance and ensures a clear and shared sense of organizational mission and future vision, a commitment to continuous review and improvement of leadership practice, and social and environmental consciousness.

2. An inclusive planning process and coherent plans that translate the organization’s mission, vision, and values into clear, aggressive, and measurable goals that are understood and effectively implemented throughout the organization.
(3) Knowledge of the needs, expectations, and satisfaction/dissatisfaction levels of the groups served by the organization; operating practices that are responsive to these needs and expectations; and assessment processes in place to stay current with and anticipate the thinking of these groups.

(4) Development and use of indicators of organizational performance that capture the organization's mission, vision, values, goals, and provide data-based comparisons with peer and leading organizations; widely sharing this and other information within the organization to focus and motivate improvement.

(5) A workplace culture that encourages, recognizes, and rewards excellence, employee satisfaction, engagement, professional development, commitment, and pride; and synchronizes individual and organizational goals.

(6) Focus on mission-critical and support programs and services, and associated work processes to ensure effectiveness, efficiency, appropriate standardization and documentation, and regular evaluation and improvement - with end-users in mind.

(7) Documented, sustained positive outcomes relative to organizational mission, vision, goals, the perspectives of groups served, and employees, considered in light of comparisons with the accomplishments of peers, competitors, and leaders (Ruben, 2004).

The Baldrige model has been an extremely popular framework for organizational self-assessment. The NIST estimates that thousands of organizations have used the
criteria for self-assessment (Calhoun, 2002). There is also evidence that, from a financial perspective, MBNQA winning organizations outperform other organizations. Przasnyski and Tai's (2002) analysis demonstrates that organizations that have been recognized as leaders by Baldrige perform well in the marketplace and, specifically, that "companies derive the most benefit, through evaluating and responding to the [Baldrige] guidelines" (p. 486). And, there is evidence that these organizations excel in both growth and profits.

Further evidence suggests that the Baldrige provides a valuable gauge of organizational effectiveness. A study by the Government Accounting Office of 20 companies that scored high in the Baldrige process found these results corresponded with increased job satisfaction, improved attendance, reduced turnover, improved quality, reduced cost, increased reliability, increased on-time delivery, fewer errors, reduced lead time (customers), improved satisfaction, fewer complaints, higher customer retention rates (profitability), improved market share, and improved financial indicators (Heaphy and Graska, 1995). In sum, there is a good deal of evidence to suggest that organizations scoring well on Baldrige standards are more successful than others, providing support for assertions that the Baldrige criteria provide a standard of excellence to which organizations can and should aspire.

From this evidence it would seem to follow that Baldrige-based self-assessment would be a useful step toward organizational excellence. Baldrige-based assessment can be helpful in attaining a variety of organizational development goals, including:

- fostering organizational self-reflection;
- educating participants about dimensions of organizational excellence;
- team-building;
- increasing and enhancing communication;
- professional development;
- promoting comparisons and benchmarking;
- identifying improvement needs;
- providing a model of organizational excellence;
- benchmarking;
- performance measurement; and
- leadership development.

Baldrige in higher education

The Baldrige framework has been adopted, adapted and used for assessment in any number of settings in business, and in 1999, the National Baldrige program advanced versions of the framework for healthcare and education. The education criteria (Baldrige, 2006) were intended to be broadly applicable to school and educational settings – public, private or corporate – at all levels.

Since its introduction a total of 99 applications have been submitted from higher education departments or institutions to the national program[2]. Two applicants have been selected as winners of the award – the University of Wisconsin-Stout in 2001, and the University of Northern Colorado, School of Business in 2004. There have been a number of college and university applications to state programs that parallel the
Baldridge, and several winners including the University of Missouri-Rolla in 1995 and Iowa State University in 2004.

Beyond higher education institutions' direct participation in the formal national and state awards program, the influence of the framework in higher education has been most apparent in the evolution of accrediting standards of professional and technical education, and more recently in regional accreditation. In business, engineering, healthcare and education, the standards for accreditation of college and university programs have come to mirror the Baldridge framework in many respects. The regional accrediting associations, perhaps most notably the North Central Association of Schools and Colleges, the Middle States Association of Schools and Colleges, and the Southern Association of Schools and Colleges emphasize issues that are central to the Baldridge framework such as leadership, strategic planning, assessment, and continuous improvement[3].

For higher education, the Baldridge offers a number of particular benefits (Ruben, 2005a; Spanghel, 2000, 2004). This framework:

- applies accepted standards of organizational excellence;
- is appropriate for an entire institution and for specific departments, programs, and advisory or governing groups;
- can be adapted to academic, student service, and business units;
- highlights strengths and priorities for improvement;
- creates baseline measures;
- provides a framework for sharing effective practices;
- broadens participation in leadership and problem solving; and
- complements new accrediting models.

The Excellence in Higher Education model

To further contextualize the Baldridge framework for higher education departments and institutions, the Excellence in Higher Education (EHE) model was developed at Rutgers University as an adaptation specifically for use within colleges and universities (Ruben, 2005a, b, c) (see Figure 2). The 2005 version is the sixth edition of the framework. The education version of the Baldridge was designed for K-university levels and its primary emphasis is on teaching and learning outcomes. In contrast to the Baldridge Education framework, EHE was designed specifically for higher education institutions, where the mission typically includes an emphasis on scholarship/research and public services/outreach as well as teaching/instruction. Moreover, the EHE model was designed to be applicable for use in assessment and planning activities by individual units of all kinds within colleges and universities – administrative, service, student life, as well as academic.

The EHE framework categories address the following themes[4]:

- 1.0 Leadership,
- 2.0 Strategic planning,
- 3.0 Beneficiaries and constituencies (stakeholders),
- 4.0 Programs, services (process effectiveness),
- 5.0 Faculty/staff and workplace.
6.0 Assessment and information use (measurement and knowledge utilization).
7.0 Outcomes and achievements.

The most usual context for using the EHE program is a retreat or workshop. Typically, the workshops last one and one-half days. Each EHE workshop consists of a step-by-step organizational assessment process, moving through the seven categories one at a time. For each category, the process includes (Ruben, 2005b):

- discussing the basic themes and standards for the category;
- "brainstorming" a list of strengths and areas for improvement for the unit with respect to the category;
- reviewing "best" practices in the category as practiced by leading organizations; and
- scoring the unit in the category on a 0 to 100 percent scale to capture perceptions of the extent to which the unit is fulfilling the standards of the category.

Once these steps have been taken for all seven categories, multi-voting is employed to rank-order the priority areas for improvement in terms of importance. Finally, improvement goals and strategies are established for the highest priority areas—generally the four to six areas perceived to be most pressing and important.

At Rutgers and a number of other higher education institutions[5], the EHE model has been used as an organizational self-assessment program within academic, student life, administrative and service departments with the aim of deriving the benefits described above.

The study

Research design overview

As with other organizational assessment programs, including those related to the Baldrige, the presumed benefits are generally assumed rather than documented. The
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Evidence that points to the program's effectiveness is often anecdotal and unsystematic. Our purpose in this study is to begin to test this assumption of effectiveness. More specifically, the studies undertaken at Rutgers University were designed to analyze the Baldrige/EHE process and organizational self-assessment, and to clarify the extent to which such programs lead to the desirable ends that are thought to result from their use.

The participating departments in this study were broadly representative of the university. There were three business/service/administrative departments [6], and three units whose missions are primarily academic [7]. Separate self-assessment workshops [8] were conducted for each of the six departments and were facilitated by the University Center for Organizational Development and Leadership, during the 2003-2004 academic year.

Each of the units in the study had individually taken part in a one and one-half day EHE self-assessment workshop (described above) facilitated by the University Center for Organizational Development and Leadership during the 2003-2004 academic year.

The first phase of the study consisted of a web-based survey of participants' perceptions of the assessment process. The online survey was distributed several months after completion of the workshops. The goal of this first phase of the investigation was to evaluate the extent of knowledge acquisition, utilizing participant perceptions of value and learning, derived from workshop participation.

The second phase consisted of in-depth interviews with department leaders approximately one year after the workshops. The second stage focused on organizational change by documenting specific improvements that occurred in response to goals established during the workshop.

There are various ways to measure impact. In phase I of the study, participants' perceptions of the value of EHE, and the knowledge they gained through participation, were utilized to measure impact. In phase II, impact was measured by the extent to which the unit had made/planned to make improvements identified as priorities in the workshop. Thus, the study examines EHE's impact at two levels of analysis: the individual level (phase I) and the unit level (phase II).

Research questions and methodology

Two broad research questions guided the study:

(1) RQ1: What were participants' knowledge acquisition outcomes? (a) Did participants perceive the EHE organizational self-assessment process to be valuable for advancing their familiarity and knowledge of the seven categories of organizational excellence included in the Baldrige/EHE model? (b) Did participants develop a clearer understanding of organizational strengths and improvement needs as a result of the organizational self-assessment process?

(2) RQ2: What organizational change outcomes are associated with the EHE process? Did departments make substantial progress on priorities they established during the Baldrige/EHE program?

The first phase – RQ1: knowledge acquisition outcomes

The first phase of the study focused on knowledge acquisition outcomes and six departments participated. The 113 individuals who participated in the EHE programs were contacted by e-mail at the end of the academic year and invited to participate in
the study. The time between participation in the self-assessment workshops and the receipt of the questionnaires ranged from 1 month to just over 11 months[9]. The e-mail explained that participation would require completion of a ten-minute survey via the Zoomerang[10] web-based survey system. All respondents were familiar with this instrument from previous applications. In all, 44 workshop participants (39 percent) responded to the survey. In the email and in the introduction to the survey at the website homepage, respondents were assured that their anonymity and confidentiality would be maintained.

The second phase – RQ 2: unit change
Data collection for phase II began one year after participation in the organizational self-assessment workshop, and sought to identify the extent to which the desired organizational changes had occurred. This phase consisted of in-depth face-to-face interviews with each of the six leaders who, with their departments, had participated in the EHE program during the previous year. Interviews were conducted by one member of the research team during the 2004–2005 academic year and were approximately one hour in length. All interviews were conducted in the interviewee’s office.

The purpose of these interviews was to document the organizational changes the units had made on each of the improvement priorities established during the self-assessment program. During the interviews, each leader was asked to review each of his/her unit’s priorities established during the previous EHE workshop and, for each, to select one of five progress ratings:

1. Fully accomplished.
2. Considerable progress.
3. Some progress.
4. No progress.
5. No longer a priority.

Leaders were also asked if others in their unit would agree with this rating.

For each priority, leaders were asked to identify next steps, or anticipate actions that would contribute to further organizational improvement. Leaders were also asked if there were other priorities that had emerged during the previous year subsequent to the assessment workshop. If identified, these priorities were explored in depth.

Data from these interviews, along with organizational documents – including departmental memos, progress reports, business meeting minutes, university newsletters – were analyzed to assess each department’s progress in achieving the priorities established during the EHE program. Leaders were also asked to discuss challenges associated with the change process.

Findings
RQ 1: knowledge acquisition outcomes
As noted, analyzing outcomes related to knowledge acquisition was the primary focus of the first phase of the study. More specifically, phase I examined whether participants perceived the EHE self-assessment process to be valuable for advancing their knowledge and understanding of the themes of the seven categories of organizational excellence included in the Baldrige/EHE model, and their importance to
organizational effectiveness. Detailed findings of this investigation are reported in Ruben et al. (2004).

Figure 3 provides a summary of responses to items on the survey concerning the perceived value of the EHE self-assessment process as a means of heightening knowledge, awareness, and understanding of the importance and applicability of the framework's respective categories. As indicated, participants reported substantial knowledge gains following participation in the EHE program.

A majority of participants (ranging from 62 to 79 percent across the six categories) perceived the program to be "valuable" or "very valuable" for heightening knowledge of EHE's critical themes and their importance to organizational effectiveness. Expressly, the self-assessment process initiated knowledge acquisition and learning about the importance of the following categories in descending order:

- category 3 (external/stakeholder focus; 79 percent);
- category 6 (measurement and knowledge utilization; 73 percent);
- categories 1 (leadership; 69 percent) and 2 (strategic planning; 69 percent);

![Bar chart showing percentage of EHE Program Participants Reporting Positive/Highly Positive Learning Outcomes]

**Figure 3.**
Perceptions of knowledge gained from workshop
• category 5 (faculty/staff and workplace climate; 65 percent); and
• category 4 (process effectiveness; 62 percent).

Category 7 was not included as a separate topic in this stage of the investigation as only the first six categories focus on approaches and implementation strategies, for which familiarity and knowledge are critical. Category 7 calls for reporting of specific outcome measures and achievements that grow out of activities defined and undertaken in 1-6. In addition, category 7 constitutes the “end result” of being aware of the organization’s utilization of the topics in categories 1-6. Thus, for these reasons, category 7 was not included.

Findings from this study also indicated that the Baldrige/EHE-based self-assessment was perceived as a useful approach for advancing additional knowledge acquisition goals. More than 75 percent of the respondents rated the self-assessment as “valuable” or “very valuable” for fostering a better understanding of their specific organizational challenges, identifying areas for improvement, encouraging information sharing about organizational strengths, facilitating the constructive sharing of opinions, and helping to improve the organization. In addition, more than 60 percent felt that the program was “valuable” or “very valuable” for motivating self-reflection within the unit, creating a shared sense of priorities for improvement, heightening the importance of benchmarking, reinforcing the sense of mission, and promoting ideals to inspire the organization.

In terms of instructional strengths, participants highlighted the following elements of the EHE program as being the most beneficial: fostering unit-wide open discussion, consideration of performance measures, clarifying the value of planning, reviewing benchmarking techniques, and providing feedback on leadership effectiveness in addition to reaffirming some of the perspectives expressed in their responses to previous questions.

The majority of respondents indicated that no changes were needed in the process, and over two-thirds of the respondents indicated that the program should be repeated every year or every other year.

RQ2: organizational change
This portion of the study sought to examine the degree to which participants, working in their individual departments, made progress on their established priorities after participating in the self-assessment process. Each unit’s progress on priority accomplishment was operationalized in four ways:

1. The number of changes the unit had made/intended to make.
2. The change’s (perceived) impact on the unit.
3. Recognition of challenges to attaining priorities.
4. The unit’s continued progress toward accomplishment of designated priorities.

The following paragraphs reveal the findings.

Changes. Collectively, the six departments established 23 priorities during the Baldrige/EHE self-assessment process (average = 4 priorities per department). Leaders reported that their units had made “considerable progress” or “some progress” on 65 percent (n = 15) of their priorities, and “no progress” on 35 percent
None of the leaders felt that their departments had "fully accomplished" any of their priorities, and, no areas were identified as "no longer priorities." The potential reasons why some departments had only "some" or "no progress" are highlighted in the facilitators and barriers to organizational change portion of the discussion section.

To clarify these ratings, leaders were asked to provide specific examples, or improvement steps, that substantiated their unit's progress. A total of 46 organizational improvement steps were identified. For priorities where "considerable progress" had been made, 29 improvement steps were noted (see Figure 4). For areas where "some progress" had been made, leaders pointed to 17 improvement steps.

No improvement steps were listed for priorities that had "no progress." Also, because no enhancements had been fully accomplished and all were still relevant, no improvement steps were listed for "fully accomplished" or "no longer a priority."

Impact of Changes. If a leader said that a priority was "fully accomplished," or the unit had made "some or considerable progress," he/she was asked to rate the impact of that change on the department on a ten-point scale (1 = no impact; 10 = significant impact).

As shown in Figure 5, there was a slight difference in the impact ratings between the progress categories. For priorities where "considerable progress" had been made, the average impact rating was 5.75 on a 1 to 10 scale. For areas where "some progress" had been made, the average impact rating was 5.

Leaders gave higher unit impact ratings to those improvements that had been identified as high priorities during the Baldrige/EHE workshop. Leaders gave departments' first priorities an average impact rating of 5 on a 1-10 rating scale, where

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**Figure 4.**
Number of improvement steps identified by progress evaluations.
Note: Rating scale for progress is 1-10

1 is “low impact” and 10 is “high impact”), while other “less critical” priorities received average impact ratings of 3 and 4, suggesting that topics that had been originally determined to be priorities continued to be seen as appropriate areas of focus throughout the improvement process[11].

Challenges. For each priority, leaders were asked to identify specific challenges their units faced while trying to make progress on their stated priorities. Overall, 50 challenges were identified. Units making “considerable progress” (n = 19, 38 percent) identified 19 challenges while units making “no progress” (n = 20, 40 percent) identified 20, and units making “some progress” (n = 11, 22 percent) identified 11 (see Figure 6).

Every leader acknowledged at least one obstacle their department encountered while trying to accomplish its priorities. Some challenges were more pervasive than others. See further discussion of these challenges in the next section.

Facilitators and barriers to organizational change. Table I displays the most common type of challenges. The most frequent of these hindrances was “resources,” including time and money (n = 12, 24 percent). The second most common challenge was “competing priorities” (n = 10, 20 percent). Many leaders felt their employees were already overburdened and, thus, did not want to create additional work for their people by executing some of these “new” priorities too aggressively. The third most popular hindrance identified by leaders was a lack of “commitment” including motivation and engagement from employees and/or the leader him/herself (n = 8, 16 percent). For instance, during the in-depth interviews, two of the leaders disagreed[12] with three of the priorities that they and their departments established during the Baldrige/EHE program. In these cases, some or no progress was made. The fourth most common challenge[13] related to “organizational structures” (n = 7, 14 percent) and their complexities, including diverse roles, varying responsibilities, and different locations. The fifth most frequent obstacle dealt with “organizational change” (n = 6, 12 percent). Four of the departments experienced significant organizational changes shortly before and after participating in the Baldrige/EHE self-assessment program (three leadership
replacements and a dramatic reorganization). As a result, employees in these departments invested most of their time and energies in dealing with these changes. The last three obstacles dealt with insufficient "knowledge" (n = 4, 8 percent) about applying the self-assessment process, holding people "accountable" through adequate follow-up/coaching (n = 2, 4 percent) and building "trust" (n = 1, 2 percent) with employees after significant organizational changes.

**Continued progress.** For each priority, leaders were asked to identify next steps, or anticipated actions that would accelerate their unit's progress. A majority of the leaders struggled to answer this question, identifying next steps for only 12 of 23 priorities established during the Baldridge-EHE program. In total, 26 next steps were identified. As illustrated in Figure 7, there were a similar number of actions identified for priorities where "some progress" (n = 11, 42 percent) or "considerable progress"
(n = 12, 46 percent) had been made. Only three future steps (12 percent) were identified for priorities where "no progress" had been made.

Leaders identified substantially more next steps for priorities that were labeled during the Baldrige/EHE workshop as being more critical to their department's success. These differences included:

- first priority: 12 steps (47 percent);
- second priority: 6 steps (23 percent);
- third priority: 4 steps (15 percent); and
- fourth priority: 4 steps (15 percent).

Summary and discussion
Multiple findings provide support for the argument that the Baldrige/EHE process is a useful tool for organizational advancement. RQ1 focused on knowledge acquisition outcomes, asking: "did participants perceive the EHE organizational self-assessment process to be valuable for advancing their familiarity and knowledge of the seven categories of organizational excellence included in the Baldrige/EHE model?" Findings indicate that the vast majority of respondents (62.79 percent, across categories 1-6) acknowledged that the self-assessment program was "valuable" or "very valuable" for heightening their awareness and knowledge of the Baldrige/EHE themes.

RQ1 also focused on broader issues of knowledge acquisition that are generally regarded as facilitators of organizational change. More specifically, "did participants develop a clearer understanding of organizational strengths and improvement needs as a result of the organizational self-assessment process?" Findings indicate that more than 75 percent of the respondents rated the self-assessment process as "valuable" or "very valuable" for fostering a better understanding of organizational challenges, identifying
areas for improvement, encouraging information sharing about organizational strengths, facilitating the constructive sharing of opinions, and helping to improve the organization. In addition, more than 60 percent felt that the program was “valuable” or “very valuable” for motivating self-reflection within the unit, creating a shared sense of priorities for improvement, heightening the importance of benchmarking, reinforcing the sense of mission, and promoting ideals to inspire the organization.

In discussing the perceived benefits of the Baldrige/EHE program, participants highlighted the following elements of EHE as being the most beneficial: open discussion, consideration of performance measures, clarifying the value of planning, review of benchmarking techniques, and providing feedback on leadership effectiveness; they also reaffirmed some of the perspectives expressed in their responses to previous questions. The majority of respondents indicated no need for changes in the process, and over two-thirds of the respondents indicated that the program should be repeated every year or every other year.

RQ2 focused on organizational change: “did departments make substantial progress on priorities they established during the Baldrige/EHE program?” Overall, the results suggest the answer is “yes.” Of the priorities established during the Baldrige/EHE self-assessment process, 65 percent of them were executed by the departments, producing “some/considerable progress.” Progress ratings reported by leaders were substantiated by “improvement steps” that reflected a priority’s perceived importance (e.g. the greater importance a department gave a priority, the more steps they took to improve in that area). In terms of impact, priorities with “considerable progress” had higher ratings than priorities with “some progress.” Impact ratings also reflected a priority’s perceived importance.

Leaders identified specific challenges that impeded their departments’ progress. These individuals reported that their departments experienced more challenges when making “considerable progress” (38 percent) or “no progress” (40 percent) on priorities, than making “some progress” (22 percent). There was also a gap when it came to future actions planned by departments. When asked to describe upcoming plans for making additional progress, leaders were only able to articulate “next steps” for a little more than half (52 percent) of the priorities established during the Baldrige/EHE program. Only 12 percent of these next steps were identified for priorities where “no progress” had been made.

One of the most interesting and fundamental questions raised by this study has to do with the relationship between knowledge acquisition resulting from the Baldrige/EHE assessment and subsequent progress on organizational change priorities: “is there a relationship between knowledge gained from the self-assessment process and subsequent progress made on departments’ EHE priorities?” Findings from this study would seem, intuitively, to support the view that such a relationship does exist, but the study design does not provide the basis for more than speculation on this point. That said, overall, responses from the individual departments reported relative to RQ2 suggest that leaders perceive that such a relationship exists. Side-by-side comparisons of findings regarding perceptions of knowledge acquisition in phase I and documented improvements implemented by the organization in areas identified as priorities in phase II are interesting. Figure 8 compares the knowledge acquisition and organizational change outcomes for departments that have made progress; specifically, the side-by-side figures indicate the percentage of department members who evaluated the knowledge dimensions of EHE as being “valuable” or “very valuable,” and the percentage of
priorities that the leaders of those departments rated as having "some" or "considerable progress." As illustrated, the knowledge outcomes (70 percent) corresponded very closely to the progress on organizational change (67 percent). Other studies have also suggested the importance of individual learning and knowledge acquisition as a source of motivation to engage in organizational change (Ismail, 2005; Pool, 2006; Washington and Hacker, 2005). Thus, it seems reasonable to infer that the knowledge generated during the self-assessment process provided a useful foundation for successful organizational change (refer to Figure 4), but the verification of this relationship is an important topic for future research.

**Implications**

The goal of this research project was to contribute to ongoing discussions about whether and how organizational self-assessment programs - the Baldrige/EHE approach, in particular - contribute to the goals of organizational improvement. The motivations underlying the project are both scholarly and practical. From a scholarly point-of-view, enhancing our understanding of the relationship between knowledge acquisition and change is one of the most fundamental and enduring pursuits of social science. And, from the perspective of the fields of organizational communication, organizational development, and human resource management the issue has particular relevance as it relates to enhancing the effectiveness interventions designed to increase organizational performance. Pragmatically speaking, an improved understanding of the role of training and assessment helps to enhance the effectiveness of organizational development efforts.
We believe this study contributes in both regards. On the one hand, the project offers support for the value of organizational self-assessment programs such as the Baldrige/EHE, and suggests that it can be a useful strategy for promoting organizational change. Presumably, change occurs as a result of knowledge acquired by participants as to the importance of the various dimensions of organizational effectiveness highlighted through the Baldrige/EHE program, along with the identification of organizational strengths and gaps relative to the standard of excellence suggested by the Baldrige framework. While the workshop aids the groups to prioritize and organize gap areas that they believe need attention, it also sets necessary conditions for constructive organizational change—an outcome that generally followed in the units that were the focus of this research.

Both successful and unsuccessful departments listed a large number of impediments. The study suggests that successful change is not so much a matter of whether obstacles are encountered, as it is in finding ways to overcome them. This implication has theoretical and practical consequences.

A number of common barriers were identified across organizations, including:

- competing priorities;
- resources;
- commitment;
- organizational structure[14];
- leadership change[15];
- insufficient knowledge;
- lack of accountability; and
- mistrust.

In addition to the usual impediments to organizational change such as competing priorities, scarce resources, issues related to personal and organizational commitment, these findings remind us also, of the importance of structural stability (Schroeder, 2004), and leadership continuity (Buch and Rivers, 2001) when it comes to sustaining the momentum for organizational change. From a training perspective, these findings suggest that assessment/planning programs need to create expectations among participants that there will be obstacles that must be overcome in order to achieve successful change efforts.

Various factors also serve as facilitators of successful change, and these can and should be taken into account in workshop design and content:

- persistence in the face of resistance[16];
- clear focus on priorities show increased productivity[17];
- enjoyment of the assessment program;
- development of a plan or strategy;
- understanding needs of constituents;
- increased understanding of the organization as a whole; and
- sense of achievement.
While training and expectation management can be helpful in this regard, it seems quite clear that effective leadership, and the ability to create "buy-in," obstacle "work around," and to maintain a vision of change in the face of challenges are key components of success. This is a topic that can and should be investigated more fully in future studies of Baldrige/EHE outcomes.

Notes
2. This number, provided by the Baldrige National Quality Office in February, 2006 includes some repetitive submissions.
3. See the Council for Higher Education Accreditation (www.chea.org), the Middle States Association of Schools and Colleges (www.msa-chea.org), the New England Association of Schools and Colleges (www.neasc.org/chea.htm), the North Central Association of Schools and Colleges (www.ncahighered.org), the Northwest Association of Schools and Colleges (www.nwccu.org), the Southern Association of Schools and Colleges (www.sacscc.org), and the Western Association of Schools and Colleges (www.wascweb.org). With a foundation of Baldrige concepts, the NCA has created an alternative to the accreditation model called the Academic Quality Improvement Program in which some 200 are presently participating.
4. The category names have been revised somewhat in the latest edition of EHE.
5. Higher education departments and institutions completing the Baldrige/EHE program include 12 Rutgers University business/service/administrative departments; 21 Rutgers University academic units; University of California, Berkeley; University of Wisconsin, Madison; University of Pennsylvania; University of San Diego; California State University, Fullerton; Miami University; Raritan Valley Community College; Howard University; University at Buffalo; University of Illinois; Excelsior College; Marygrove College; Arizona Pacific University; University at Binghamton; University of Vermont; University of Massachusetts; MIT; University of Cincinnati; University of Texas at Austin; Seton Hall University; and others.
6. Business/service/administrative departments provide support and programming to external University constituents, and various operational and maintenance support services to the campus community.
7. The three units whose missions are primarily academic services serve as liaison to municipal, county, and state agencies; provide access to scholarly resources that support intellectual inquiry, knowledge creation, and lifelong learning for the University community, the citizens of New Jersey, and the broader scholarly community; and collect, research, preserve and display works of art for study and enjoyment by the Rutgers community and visitors from outside the Rutgers community.
8. Details of the self-assessment process and scoring methodology for the workshop are provided in Ruben (2005b).
9. We chose to conduct the follow-up research at the completion of the academic year in which the assessments had taken place in an effort to minimize the impact influences from a new academic year, such as administrative and strategic changes within the institution.
10. Zoomerang is an internet-based survey tool that allows clients to design and send surveys, and analyze the results in real time. See http://zoomerang.com/login/index.zgi
11. The intent of this question was to capture the leader's sense of the extent to which these improvements turned out to be significant to the organization. However, because the leaders
had participated in the earlier assessment, their responses to this question could simply be a reaffirmation of the importance of the priorities established earlier.

12. In these instances, the leaders were either new to the department or decided that the original priorities were no longer valid.

13. During the time between the assessment workshop and the interviews in phase II three of the four departments studied experienced significant changes in personnel and organizational structure: in one the leader was replaced, in another the leader resigned and the replacement had not yet been found; in the third one department lost several employees and one department gained new divisions within their department.

14. In some instances, new operating units were added to the department.

15. In one instance, the leader who encouraged and participated in the assessment was replaced before the follow-up phase of the research was conducted.

16. Participants identified challenges they faced while trying to make progress on their priorities.

17. The results show that the more the leader focused on priorities the more progress they made.

References


Ruben, B.D. (2005a), Excellence in Higher Education: An Integrative Approach to Assessment, Planning and Improvement in Colleges and Universities, National Association of College and University Business Officers, Washington, DC.


Further reading


Ruben, R.D., Connaughton, S.L. and Russ, T.L. (2005), "What impact does the Baldrige/Excellence in higher education self-assessment process have on institutional effectiveness?", paper presented at the Annual Conference of the National Consortium for Continuous Improvement in Higher Education.

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