Successful Applications of the Balanced Scorecard in Higher Education

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ABSTRACT. Are there management tools that professionals use in business that academics have used successfully in higher education? The answer to that question is *yes*, and the balanced scorecard (BSC) is one such tool. The author reports on measures that administrators chose for the BSCs of 2 educational institutions whose successes have been recognized through the Malcolm Baldrige National Quality Award.

Keywords: balanced scorecard, key performance measures, Malcolm Baldrige National Quality Award

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B usiness and educational institutions are experiencing challenges such as increased competition, globalization, emerging technology, resource constraints, and the consequences of unethical behavior. Leaders in business and education are more often recognizing the importance of being customer focused by identifying and separating value-added and nonvalue-added activities by and in collecting information for performance evaluation and continuous improvement.

Leaders of educational institutions must answer these important questions: Are schools meeting their missions? Are schools offering educational value to their students? Can schools improve their processes and create additional value while containing or reducing costs? Are schools effectively and efficiently using scarce resources such as intellectual capital, state appropriations, other revenue sources, people, and time?

Are there management tools used in business that may be useful in higher education? The answer to this question is *yes*, and the balanced scorecard (BSC) is one such tool. Although published reports of successful applications of BSC in higher education are limited, the potential for successful application exists. I report successful application of BSC at two educational institutions that have received the Malcolm Baldrige National Quality Award (2003).

The BSC is an integrated resultsoriented set of key-performance measures, including financial and nonfinancial measures, which comprise current performance and drivers of future performance. The BSC should be a component of a strategic management system that links the entity's mission, core values, and vision for the future with strategies, targets, and initiatives that are explicitly designed to inform and motivate continuous efforts toward improvement (Hoffecker, 1994; Kaplan & Norton, 1992a, 1992b, 1993, 1996a, 1996b; Maisel, 1992; Newing, 1994, 1995). The identification, communication, and evaluation of these key-performance indicators play an important role in strategic planning, in translating strategy into action, and in evaluating performance.

The concept of the BSC was first introduced by Kaplan and Norton (1992b) in their widely cited article, "The Balanced Scorecard: Measures that Drive Performance," which appeared in the *Harvard Business Review*. The widespread adoption and use of the BSC in business is well documented.

The basic premise of the BSC is that financial results alone cannot capture value-creating activities. Kaplan and Norton (1992b) suggested that organizations, while using financial measures, should develop a comprehensive set of additional measures to use as leading indicators, or predictors, of financial performance. They suggested that measures should be developed that address the following four organizational perspectives:

1. Financial perspective: "How should we appear to our stakeholders?"

2. Customer perspective: "How should we appear to our customers?"

3. Internal business processes perspective: "What processes must we excel at?"

4. Learning and growth perspective: "How can we sustain our ability to change and improve?"

All of the measures in the four perspectives must be aligned with the organization's vision and strategic objectives, enabling managers to monitor and adjust strategy implementation (Kaplan & Norton, 1996b). The BSC provides a way of organizing and presenting large amounts of complex, interrelated data to provide an overview of the organization and foster effective and efficient decision making and continuous improvement. Developing the BSC requires the identification of several key components of operations and financial performance, establishing goals for these components, and then selecting measures to track progress toward these goals.

BSC and Malcolm Baldrige National Quality Award Program

An adapted form of the BSC is a component of the Malcolm Baldrige National Quality Award Program (2003). The program is the vehicle of implementation for the Malcolm Baldrige National Quality Improvement Act (1987). The primary objective of the program is to help U.S. businesses improve their competitiveness in the global market by identifying role-model organizations, recognizing them, and disseminating their best practices throughout the United States.

The Malcolm Baldrige National Quality Award Program, after adapting the business criteria and establishing education criteria for performance, awarded the first award for education. The University of Wisconsin—Stout was one of the first three recipients.

The Malcolm Baldrige National Quality Award Program (2003), "Education Criteria for Performance Excellence," was designed to help organizations use an integrated approach to performance management that results in (a) the delivery of ever-improving value to students and stakeholders, which contributes to education quality and organizational stability; (b) the improvement of overall organizational effectiveness and capabilities; and (c) organizational and personal learning. The criteria place heavy emphasis on the development of a comprehensive measurement system that is consistent with the BSC.

The Malcolm Baldrige National Quality Award Program (2003) identifies 11 core values and concepts that comprise the philosophical foundations of performance excellence in education including visionary leadership; learning-centered education; organizational and personal learning; valuing faculty, staff, and partners; agility; focusing on the future; managing for innovation; managing by fact; social responsibility; focusing on results and creating value; and having a systems perspective.

These Malcolm Baldrige National Quality Award Program (2003) core values and concepts are embodied in seven categories that include leadership; strategic planning; a student, stakeholder, and market focus; measurement, analysis, and knowledge management; faculty and staff focus; process management; and organizational performance results.

Each of these seven categories contains a set of requirements that an organization should address in its process of self-assessment. For example, in the organizational performance results category, the organization must specify the following results that the approaches of the first six categories yield:

1. Student learning results should be based on a variety of assessment methods and reflect the organization's overall mission and improvement objectives taken together to represent a holistic appraisal of student learning (customer perspective).

2. Student- and stakeholder-focused results should involve satisfaction measurements about specific educational program and service features, delivery, interactions, and transactions that bear on student development and learning and the students' and stakeholders' future actions (customer perspective).

3. Budgetary, financial, and market results should include instructional and general administrative expenditures per student, tuition and fee levels, cost per academic credit, resources redirected to education from other areas, and scholarship growth (financial perspective).

4. Faculty and staff results should include innovation and suggestion rates, courses or educational programs completed, learning, on-the-job performance improvements, cross-training rates, collaboration and teamwork, knowledge and skill sharing across work functions, units, and locations, employee wellbeing, satisfaction, and dissatisfaction (learning and growth perspective).

5. Organizational effectiveness results, including key internal operational-performance measures, should include the following: the capacity to improve student performance and student development, the educational climate, indicators of responsiveness to student or stakeholder needs, supplier and partner performance, key measures or indicators of accomplishment of organizational strategy, and action plans (internal business process perspective).

6. Governance and social responsibility results should include internal and external fiscal accountability, measures or indicators of ethical behavior and of stakeholder trust in the governance of the organization, regulatory and legal compliance, and organizational citizenship (governance and social responsibility perspective).

A comprehensive set of leading and lagging measures or indicators tied to student, stakeholder, or organizational performance requirements should be chosen and represent a clear basis for aligning all plans, processes, measures, and proposed actions with the organization's goals and priorities; for monitoring actual performance; and for providing a basis for improving student, operational, and financial performance (Malcolm Baldrige National Quality Award Program, 2003). The results represent a BSC for the educational institution in which the lagging indicator is student-learning results and other results are considered leading indicators

or drivers of student learning (Karathanos & Karathanos, 2005). Learning can be tracked while monitoring progress in building the capabilities and acquiring the resources that enhance the capacity to improve student performance.

Reported Adaptations and Applications of BSC in Higher Education

Although the application of the BSC in the business sector is well documented, little research has been reported regarding the adaptation or application of the BSC in the education sector. Papenhausen and Einstein (2006) revealed how BSC could be implemented at a college of business. Karathanos and Karathanos (2005) presented the detailed measures of the BSCs of the first three recipients of the Malcolm Baldrige National Quality Award (2003) in education. Karathanos and Karathanos stressed the importance of clear alignment of measures with the mission, core values, and strategic goals of each organization.

Cullen, Joyce, Hassall, and Broadbent (2003) proposed that BSC be used by educational institutions to reinforce the importance of managing-rather than only monitoring-performance. Sutherland (2000) reported that the Rossier School of Education at the University of Southern California adopted BSC to assess its academic program and planning process. Bailey, Chow, and Haddad (1999) surveyed business deans about potentially useful measures. Chang and Chow (1999) reported that responses in a survey of 69 accounting department leaders were generally supportive of BSC's applicability and benefits to accounting programs by enhancing strategic planning and continuous improvement efforts.

The National Association of College and University Business Officers (NACUBO) reported in 1996 that the University of California, San Diego's (UCSD) senior management launched a BSC planning- and performancemonitoring system for 30 institutional (but not instructional) functions using three primary data sources: (a) UCSD's internal financial reports; (b) NACUBO benchmarks; and (c) faculty, staff, and student customer-satisfaction surveys. UCSD reported several benefits and outcomes as a result of this initiative.

The paucity of reported BSC applications in educational institutions, especially in the instructional functions, does not imply a lack of applicability. There may be a lack of awareness or understanding of its application as part of strategic management and the need to focus on multiple measures of performance. Gourman (1993) and the Educational Rankings Annual (Hattendorf, 1996) explicitly recognized the limitations of any one ranking methodology. Rather than selecting one ranking approach, the Educational Rankings Annual (Hattendorf) provided separate rankings on the basis of four groups of measures including (a) reputation rankings derived from the opinions of college and university presidents, deans, department chairpersons, senior scholars, and others; (b) citation analysis; (c) faculty productivity, measured by the number of publications; and (d) statistical rankings derived from such information as endowment, library facilities, and admissions selectivity. Rankings in the media by U.S. News & World Report, Business Week, and Fortune also included multiple measures.

Thus, existing ranking approaches consider multiple facets of educational programs. However, these approaches do not select the various measures or organize them on the basis of an integrated system of performance drivers and diagnostic indicators. Moreover, the media rankings do not relate these measures to each institution's mission. The usefulness of these existing rankings for guiding individual programs toward continuous improvement and change is questionable.

The present article presents the results of successful implementation of BSC at the Kenneth W. Monfort College of Business at Northern Colorado, a 2004 Malcolm Baldrige National Quality Award recipient, and at the University of Wisconsin—Stout, the first university to receive the award in 2001. The detailed measures comprising the BSCs of these two institutions are presented in the Appendix. Although the BSCs of these two institutions cover all but one of the perspectives of the award (governance and social responsibility was not added until 2003), their individual measures differ considerably in several areas, reflecting the differences in their individual missions, core values, and vision.

The University of Wisconsin-Stout (2001) provides a distinct array of programs leading to professional careers focused on the needs of society. Some unique characteristics include the following: (a) More than half of the 27 undergraduate programs are not offered at any other campus in the University of Wisconsin system, and several are unique in the nation; (b) the programs emphasize business-relation processes and staying current with fast-changing technology and market dynamics; and (c) traditional instruction is reinforced by extensive technology laboratories and industry partnerships.

The university's programs also include the following key student requirements and corresponding measures or indicators: (a) cutting-edge, career-oriented programs (number of new programs, placement success); (b) high-quality, active-learning education (percentage of lab instruction and faculty contact); (c) effective student support services (retention, academic success, student satisfaction); and (d) related employment and academic or career growth opportunities (placement in major, graduate success, employer satisfaction; Karathanos and Karathanos, 2005).

The Kenneth W. Monfort College of Business (2004) at Northern Colorado's mission is to deliver excellent undergraduate business programs that prepare students for successful careers and responsible leadership in business. Some of its unique characteristics follow: (a) pursuing excellence in undergraduate-only business education, uniquely among its regional and national peers; (b) one of five undergraduateonly programs nationally to hold Association to Advance Collegiate Schools of Business accreditations in business and accounting; and (c) commitment to a program strategy of high-touch, widetech, and professional depth to make the college of business a value leader compared with its competition.

In addition, the programs have the following key strategic objectives and corresponding measures or indicators:

(a) build a high-quality student population (average ACT score of new freshmen and average transfer student GPA); (b) maintain high-quality faculty (overall percentage of faculty academically and or professionally qualified); (c) maintain adequate financial resources (available state funds and available private funds); and (d) develop market reputation consistent with program excellence (college of business media coverage; Kenneth W. Monfort College of Business, 2004).

Evaluating performance by using key-performance indicators and incorporating those evaluations into strategic planning have served these institutions well in their search for and attainment of continuous improvement. Both institutions' applications for the Malcolm Baldrige National Quality Award Program provided extensive data relating to the key performance measures used by these organizations.

Conclusions

Although being recognized in rankings in national media reports can be satisfying and valuable to student recruitment, an integrated management system that includes BSC should be considered for application in higher education. Identifying and using key performance measures consistent with the institution's mission and core values and seeking continuous improvement offer opportunities to create educational value in higher education. BSC, as a strategy-based management system, enables not only business organizations but also educational institutions to clarify their visions and translate strategies into operational objectives, measures, and actions in alignment with their missions and core values. Furthermore, the process of establishing the BSC provides the opportunity for identifying what really matters to customers and stakeholders: why the institution exists, what is important to the institution, and what the institution wants to be.

NOTE

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Balanced Scorecard Measures of Two Recipients of the Malcolm Baldrige National Quality Award in Education: University of Wisconsin—Stout and Kenneth W. Monfort College of Business (MCB) at Northern Colorado University (UNC)			
Baldrige expected measures in education criteria	Measures used at University of Wisconsin—Stout	Measures used at Kenneth W. Monfort College of Business	
tudent learning results Customer-focused results) Should be based on a variety of assessment methods and should reflect the organization's overall mission and improvement objectives and together should represent holistic appraisals of student learning	 Freshman ACT scores Freshman retention "At risk" freshman retention Active learning Computer competency Skills development Leadership Problem solving Conflict resolution Communication Braduation rate Student job placement Student job placement Student job program effectiveness Alumni rating of program effectiveness Alumni appreciation of diversity Skill assessment by employers Basic skills Communications Technical Organizational or problem solving Leadership 	 Freshman ACT scores Education Testing Services field achievement test in business Student participation in marketplace Employer survey Program quality Student learning Parent surveys Educational Benchmarking Institute's undergraduate business exit study: Abilities and skills development Use technology Manage technology Analyze and interpret data Think critically Solve problems Leadership Presentation Exit study Academic rigor of business courses vs. nonbusiness courses Alumni survey Ability to apply technology 	
tudent- and stakeholder-focused results Student and stakeholder satisfaction measurements about specific educa- tional program and service features, delivery, interactions, and transactions that bear upon student development and learning and the students' and stakeholders' future actions	 Freshman ratings of educational experience Number of transfers-in Numbers that would attend again Student satisfaction with campus environment Alumni satisfaction with instruction Alumni indication that they would attend again Employer ratings of graduates' preparation Board of Regents satisfaction with Mission appropriateness Student outcomes Leadership Accountability Fulfilling mission Community ratings of customer service 	 Student or stakeholder satisfaction with program, perception of value, and referral Alumni satisfaction Employer satisfaction Satisfaction with quality of faculty and instruction Satisfaction with quality of teaching in business courses compared to non-business courses Satisfaction with accessibility of major course instructors Satisfaction with breadth of curriculum Global perspective Interaction with practitioners Instructors presenting technology issues Practical experiences Satisfaction: training to use business school computing resources Satisfaction with availability of computers Satisfaction with quality of classrooms Satisfaction with size of enrollments for required and major courses 	

	APPENDIX (cont.)	
Budgetary, financial, and market results Instructional and general administrative expenditures per student, tuition and fee levels, cost per academic credit, resources redirected to education from other areas, scholarship growth	 Tuition comparisons On-campus room and board costs Tuition revenues Prioritization of funding Budget allocation to instruction Budget allocation to institutional support Expenditures allocated to personnel Year end budget variances from budget plan University reserves Foundation assets Scholarship dollars awarded 	 13. Student satisfaction with emphasis on high-quality teaching 14. Value creation for students, parents, and employers Comparing expense of education quality, rate the value of investment made 15. Stakeholder referrals Student (juniors, seniors) Parent Employers 16. Extent business program experience fulfilled student expectations 17. Student retention of MCB relative to UNC 1. State budget growth relative to inflation 2. Growth rate of direct cost per credit hour relative to inflation 3. Proportion of state budget spent on instruction 4. Nonlabor expenditures 5. Growth in nonstate budget 6. Annual tuition and fees vs. peers and national average 7. Student scholarships number Value awarded 8. Competition for high quality students vs. peers 9. Finley Freshman Scholars Attending Commits 10. Share of Western Undergraduate Exchange Scholar Program: diversity 11. Freshman admits and enrollees
Faculty and staff results Innovation and suggestions rates; courses or educational programs completed; learning; on-the-job performance improvements; cross-training rates; collaboration and teamwork; knowledge and skill sharing across work functions, units, and locations; employee well-being, satisfaction, and dissatisfaction	 Key indicates of faculty and staff morale, well-being, and development Employee satisfaction: All employees Classified Unclassified Faculty voluntary turnover Classified staff grievances Diversity: Women faculty Minority faculty Discrimination and harassment Faculty with doctorate Professional development expenditures Satisfaction with opportunities for training or professional development Evaluation of Microsoft training Safety training Injury or accident rates Worker's compensation claims Worker's compensation experience modification factor 	 Faculty qualifications Proportion of classes taught by academically or professionally qualified faculty Number of executive professors Faculty survey Salary, promotion, and tenure process rating Degree to which senior faculty mentor junior faculty 4. Intellectual contributions Refereed research in 5-year window Staff technology certifications Faculty satisfaction Overall Evaluation of undergraduate program Faculty sharing a common vision Computer support (hardware and software) Staff satisfaction Well-being and attitudes Overall satisfaction and comparison to UNC

APPENDIX (cont.)

Organizational effectiveness results, including key internal operations' performance measures

Capacity to improve student performance, student development, education climate, indicators of responsiveness to student or stakeholder needs, supplier and partner performance, key measures or indicators of accomplishment of organizational strategy and action plans

- 1. Distinctive programs
- 2. Undergraduate curriculum
- 3. Federal grant expenditures
- 4. Laboratory-based instruction
- 5. Enrollment
- 6. Distance learning opportunities
- 7. Audit compliance
- 8. Safety and security performance
- 9. Support services effectiveness: Current students Alumni
- 10. Employees' assessment of budgetplanning process
- 11. Information technology use
- 12. Student assessment of
 - Computer labs Library support Dining services Student center services
 - Resident life
- 13. Purchasing transactions
- 14. Efficient use of electricity
- 15. Trends in energy use

1. Student quality

- Freshman
- ACTs > 24 Average ACTs
- Transfer in GPA
- 2. Graduates produced Number
 - Rate of increase vs. UNC
- Alumni placement survey Percentage not placed or attending graduate school relative to UNC and state unemployment rate Percentage placed in position related to major relative to UNC
- 4. Support process performance Admissions Freshman business admits
 - Number
 - Average ACT
 - Finley Scholar commits
 - Career services
 - College transition center Prebusiness
 - Reinstates
 - IT
 - Library
 - Student satisfaction
 - Advising center
 - Graduation rates relative to UNC Foundation
 - Audit issues
- Annual giving in number and dollars 5. Student survey
 - Percentage citing reputation of
 - college or faculty as reason for attending MCB
- 6. MCB press coverage
- Stories on MCB or professors in media
- 7. MCB vs. peers on value Average class sizes vs. tuition and fees
 - Average class sizes vs. percentage of doctorally qualified faculty vteaching business core Ratio of student majors to lab
 - desktop computers
- 8. MCB value for students' average starting salary/4 years of tuition and fees
- 9. Pattern of MCB accomplishments demonstrating organizational effectiveness
- 1. Satisfaction with business curriculum instructors presenting ethical issues
- 2. Satisfaction with business curriculum instructors presenting social responsibility issues

(appendix continues)

Governance and social responsibility results Fiscal accountability, both internal

and external; measures or indicators of ethical behavior and of stakeholder trust in the governance of the [This component not added to Baldrige National Quality Program until 2003.]

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APPEN	DIX (cont.)
organization; regulatory and legal compliance; organizational citizenship	 Percentage of faculty contributing to United Way No violations or citations for prior 5 years Affirmative action Equal employment Treatment of students Faculty or staff involvement (local and regional) University service Number of committee chairs Number on committees College service Percentage on committees Department service Percentage on committees Community service
	Percentage on committees Sponsorships

Note. Adapted from the University of Wisconsin–Stout 2001 Malcolm Baldridge Quality Award application summary and the Kenneth W. Monfort College of Business 2004 Malcolm Baldridge National Quality Award application summary with permission.

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