

USING THE BALANCE SCORECARD APPROACH: A GROUP EXERCISE

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ABSTRACT

Colleges of Business are now under increasing pressure from AACSB to engage students in collaborative learning experience and to develop their critical thinking skills. This paper presents an experiential learning exercise used at King's College that is designed to accomplish both of these objectives and to teach students the principles of the "Balanced Scorecard" This paper describes the "Balanced Scorecard" concepts, presents an exercise using this approach, and provides potential solutions to the exercise.

INTRODUCTION

In 1996, Kaplan and Norton wrote a book describing what they called the "balance scorecard" approach. It contends that the traditional financial accounting model must be expanded to incorporate the valuation of a company's intangible and intellectual assets. It states that both financial and non-financial measures must be part of the information system for employees at all levels of the organization; senior executives need both financial and non-financial measures to understand the drivers of long-term financial success and rank and file employees need this information in order for them to understand the financial consequences of their decisions and actions. This book argues further that there should be a balance between a firm's long and short-range objectives, financial and non-financial measures, lagging and leading indicators, and external and internal performance perspectives. The scorecard is designed to translate an organization's mission and strategy into a comprehensive set of performance measures. These measures are organized around four perspectives: financial, customer, internal business processes, and learning and growth. In addition to providing a comprehensive performance evaluation tool, the process of implementing a balance scorecard is the creation of an "alignment culture" where corporate goals and strategies become institutionalized across the company (Huang and Hu, 2007).

ABSEL has experience with using balanced scorecards in the classroom to teach management concepts. Kallás and Sauer (2004) discuss the outcome of a balance score card strategy in a course offered in the graduate program of

Business Administration and Accounting. They observed that experimental performed better than the control group who used balance scorecards performed significantly better than control groups taking a "Business Games" course. Scherpereel (2007) argues that decision alignment, is important to business game performance. Objective, evaluative feedback on decision making effectiveness can serve as a motivator for students playing multiple-period business games. Using balance scorecards may be a way of achieving decision alignment. To support this conclusion, Scherpereel points to an earlier survey by Downing (2000) where for 66% of the companies surveyed reported that implementing balanced score cards in order to achieve alignment.

This paper presents a group exercise that has two major purposes. First, it is designed to teach students the balanced scorecard concepts cited above. Second, since the exercise is done by student groups, it also helps to meet two of AACSB's recommendations. AACSB recommends that students should have opportunities to engage in collaborative learning. They argue that, "each student is a resource who brings unique experience and knowledge to combined tasks. Students need to acknowledge their responsibilities to their fellow students by actively participating in group learning experiences (AACSB, 2006, p. 56)." In addition, the exercise helps develop reflective thinking skills or critical thinking skills, another AACSB concern.

The exercise presented in this paper requires that students develop a balanced scorecard for an educational institution. Using an academic setting is appropriate for two reasons. First, students are familiar participants in the activities of their college or university. Further, most students are exposed to rankings of schools by publications such as *U.S. News and World Report*. Second, colleges and universities use the balance scorecard approach for performance evaluation (Kettunen, 2005). In 1999, Congress approved the Malcolm Baldrige National Quality Award for Education. Karathanos and Karathanos (2005) discuss the balanced scorecards of the first three recipients, the Chugach School District in Alaska, the Pearl River School District in New York City, and the University of Wisconsin-Stout. Drtina, Gilbert, and Alon (2007) describe the use of a balanced scorecard to show by Rollins College in the AACSB re-accreditation process. In conclusion, because this exercise provides real-world

examples of performance measures used in higher education, students' personal interest in performance measurement may be more highly engaged.

The exercise presented here has been used in two different courses—Introduction to Managerial Accounting (freshmen level course) and Accounting Policy (a graduate class for MBA students). In using the exercise, students are divided in groups of about four students each. These groups are formed to maximize heterogeneity by putting students with different backgrounds and majors together. The exercise is designed to be completed within a 50-minute class period. The balanced scorecard concept itself can be presented in less than 20 minutes and the students can answer the five exercise questions, and the exercise can be debriefed, in the remaining 30 minutes. After dividing the class into teams and explaining the basic concepts of the “Balanced Scorecard,” students are asked to read the description of East State College below and to answer the five questions posed.

BALANCED SCORECARD EXERCISE

East State College is a four-year undergraduate institution and its mission is to provide its students with the intellectual and moral preparation that enables them to lead meaningful and satisfying lives. In addition, the Board of Directors of East State College wants the school to be a center for excellence in education and research. The school's academic programs are divided into two divisions, the Business Division and the Arts and Sciences Division.

The president of East State College, your employer, has requested that you devise a means for presenting outcome data in the annual report to the Eastern State Legislature. After researching performance reports, your president is convinced that the Legislature would be impressed by a presentation of performance measures in the form of a balance scorecard. Organizations use balanced scorecards as a management tool to translate the organization's mission and strategy into a comprehensive set of performance measures. These metrics provide detailed feedback to managers about the organization's progress towards its goals.

INSTRUCTIONS

1. Organize the data shown in Table 1 (See Appendix) into a balanced scorecard using the four traditional perspectives: learning and growth, internal business processes, customers, and financial (Use Form A below—See Appendix).

A. The Learning and Growth Perspective:

Major development and expansion of employees' abilities is necessary so that their knowledge and creativity can be rejuvenated and enhanced for achieving organizational objectives. In addition, in order to grow, firms need to improve their information and technology systems and align employee incentives with the accomplishment of organizational goals. Three outcome measurements are the hallmarks of this perspective: employee

satisfaction, employee retention (percentage of key staff turnover), and employees' productivity (revenue per employee).

B. The Internal Business Process Perspective:

This perspective examines the processes that are critical for achieving the two perspectives above (customer and financial objectives). The three principal processes that need to be considered here are: innovation, operations, and post-sale service.

C. The Customer Perspective:

In the past, companies could concentrate on their internal capabilities, emphasizing product performance and technological innovation. Now companies are shifting their focus externally to customers. Five customer value outcome measures are the hallmark of this perspective: market share, customer retention, customer acquisition, customer satisfaction and customer profitability. Companies need to identify the customer and market segments in which they compete. These segments represent the sources that will deliver the revenue component of the company's financial objectives. Among the core customers' outcome measures are satisfaction, loyalty, retention, acquisition and profitability.

D. The Financial Perspective:

This perspective encourages business units to link their financial objectives to corporate strategy. For most organizations, the financial themes of increasing revenues, improving cost and productivity, enhancing asset utilization, and reducing risk can provide the necessary linkages across all four scorecard perspectives. Three financial themes are the primary components of this perspective: revenue growth and mix, cost reduction and productivity improvement, and asset utilization and investment strategy.

Each Division of East State College is a financial responsibility center whose costs arise from periodic yearly appropriation decisions. However, the President of East State College is seldom confident that the “correct” amount is being spent by each Division. The inputs for each division consist of students, faculty, library resources, technology resources, and funds. Each Division's outputs include education, research, and community service. The performance data shown in Table 1 pertaining to inputs and outputs was collected for the prior 3 years.

2. Based on the performance report shown in Table 1, comment on the effectiveness and efficiency of the Business School.
3. List the strengths and weaknesses of the evaluation measures that you used in judging the effectiveness and efficiency of the Business School.
4. Should the State Legislature reduce financial support to East State College? List what additional information would be useful in determining division budget cuts.
5. Suggest other performance measures that would be useful for a balanced scorecard evaluation using the four traditional perspectives of customer, financial, internal business processes, and learning and growth.

DEBRIEFING THE EXERCISE

After all of the student groups have completed the exercise, they are asked to draw their balanced scorecards on the board. They can use the number associated with each item to save time. The balance scorecards developed by each student group can then be compared. This can provide a framework of discussing each perspective. It is important to

note that there is no one correct answer to which items appear in each box of the scorecard. The important thing is the reasoning used by each group to arrive at their answers.

After the discussion of the scorecard is complete, students are asked to comment on the efficiency and effectiveness of the Business School (Instruction 2 above) and to list the strengths and weaknesses of the evaluation measures that they used in reaching this conclusion (Instruction 3 above). Below are some possible answers to these two questions.

ANSWERS TO INSTRUCTIONS 2 AND 3

The following list of effectiveness and efficiency measures is only one suggested solution to this problem. Some measures capture both efficiency and effectiveness dimensions. In addition, the perspectives listed for each measure are only suggestions. Other solutions to this case may be equally valid.

EFFECTIVENESS MEASURES

- National ranking by other colleges – Internal Business Processes Perspective
 - Strengths: Deans at other colleges are external individuals who are knowledgeable about faculty and education.
 - Weaknesses: May not reflect potential employers' criteria.
- Ability to attract students – Internal Business Processes Perspective
 - Applicants per admission slot
 - Strengths: Reflects reputation of the school to students.
 - Weaknesses: Can be manipulated by changes in the application process.
 - Acceptances to offers
 - Strengths: Reflects willingness of students to make final commitment to the college.
 - Weaknesses: Can be manipulated by admitting students unlikely to have competing offers.
 - National test percentile
 - Strengths: Objective measure that is consistent across all students.
 - Weaknesses: Ignores factors such as experience and leadership. Can be manipulated by only admitting students with high test scores.
- Education of students – Customer Perspective
 - Teaching evaluations
 - Strengths: Reflects students' opinions of instructor's ability to teach.
 - Weaknesses: May reflect entertainment ability rather than teaching ability of instructor.
- Campus Safety – Internal Business Processes Perspective
 - Emergency calls to campus security
 - Strengths: Reflects the activity of campus security.
 - Weaknesses: Does not capture the severity of each call.
- Placement of students – Customer Perspective
 - Mean starting salary
 - Strengths: Is a market test that reflects employer's estimated minimum value.
 - Weaknesses: Does not reflect the value added by East Coast.
 - Mean job offers per student
 - Strengths: Reflects willingness of recruiters to compete for graduates.
 - Weaknesses: Does not indicate aspects other than an offer has been made.
- Quality of research – Learning and Growth Perspective
 - Mean refereed publications
 - Strengths: External measure of ability to meet minimum publication standard.
 - Weaknesses: Measures quantity and not quality of publications.
 - Total books published
 - Strengths: Evidence of faculty's ability to complete a major project.
 - Weaknesses: Many books have limited sales and even more limited impact.

EFFICIENCY MEASURES

- Cost per student – Financial Perspective
Budget per student
Budget per faculty member
Strengths: Captures cost information, a key aspect of efficiency.
Weaknesses: Affected by appropriation decision outside control of deans.
- Faculty-student ratio – Internal Business Processes Perspective
Students per faculty member
Strengths: Measures the potential of faculty to interact with students.
Weaknesses: May not measure actual interaction.
Does not distinguish research from teaching faculty.

ANSWERS TO INSTRUCTIONS 4 And 5

Finally, students are asked to answer the questions of whether the State Legislature should reduce financial support to East State College (Instruction 4 above) and to list what additional information they would find useful in determining division budget cuts (Instruction 5 above). Below is a list of possible performance measures that could be helpful in determining budget cuts:

- Average alumni giving rate
- Average class size
- Average freshman retention rate
- Average graduation rate
- Average high school class standing of applicants
- Average high school class standing of accepted students
- Average teaching evaluation score
- Budget per publication
- Campus crime reports per year
- Campus housing occupancy rate
- Faculty salaries
- Graduation rate performance
- Honor code violations per year
- Job placement rate within 6 months of graduation
- National rankings by external parties
- Percent faculty with top terminal degree
- Percent full-time faculty
- Percent of the campus accessible by wireless connection
- Quality of research
- Regional rankings by deans of business schools
- Student to computer ratio for technology labs
- Total conferences attended by faculty
- Total conferences attended by staff

DISCUSSION

As Page and Mukherjee (2006) noted at a prior ABSEL meeting, the amount of information pertaining to different fields has grown rapidly. As a result, faculty may now feel increasing pressure to pack more and more factual content into their classes in order to insure that students are achieving desired learning objectives. The end result may be a lack of emphasis on developing critical thinking skills even though AACSB suggests that “reflective thinking skills” are an important outcome for business schools (AACSB, 2006). This may also encourage faculty to reduce the amount of time spent on collaborative learning exercises.

The exercise presented here is designed to accomplish three major objectives: to teach students the concepts of the balanced scorecard, to develop student’s critical thinking skills, and to engage students in collaborative learning. With regard to developing critical thinking skills, Bloom (1956) in his well-known skills taxonomy contends that there are six major cognitive objectives that range in increasing order of complexity as follows:

1. Knowledge-skills that require recall of information; remembering.
2. Comprehension-skills that require one to establish

relationships, categorize, or classify information.

3. Application-skills that require one to apply general principles, ideas, or theories to concrete situations.
4. Analysis-skills that require one to break apart abstractions into their constituent elements and show the relationship among those elements.
5. Synthesis-skills that create new expressions or innovative patterns.
6. Evaluation-skills that require one to make judgments about ideas, methods, values, or solutions.

The exercise requires students to remember the principles of the “Balanced Scorecard” approach (knowledge component) and to categorize information (Instruction 1) (comprehension component). It also requires that they apply the “Balance Scorecard” principles to East Coast College data (application skills). However, the main thrust of the exercise is for students to develop analysis, synthesis, and evaluation skills. One of the major requirements of the exercise is for students to state whether they would recommend that the state reduce the appropriation for East State College. While this requirement focuses specifically on the “evaluation” component of Bloom’s taxonomy, students cannot make this decision without analyzing the data in Table 1 (analysis component) and looking for patterns among the data (synthesis component).

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APPENDIX

TABLE 1
East Coast College's Performance Measures

All dollar amounts are in thousands	Business			Arts and Sciences		
	2006	2005	2004	2006	2005	2004
1. Acceptances to offers	56%	59%	61%	75%	80%	76%
2. Applicants per slot	12.5	12.8	15.7	6.2	7.4	7.8
3. Budget per faculty member	\$281	\$281	\$281	\$379	\$379	\$379
4. Budget per student	\$27.20	\$26.00	\$25.00	\$40.80	\$39.80	\$40.30
5. Emergency calls to campus security	21.00	20.93	20.90	17.98	17.96	17.94
6. Freshman retention rate	83%	86%	89%	81%	86%	87%
7. Mean job offers per stud.	5.8	4.9	4.1	2.6	3.8	6.0
8. Mean refereed publications	9.0	5.7	-0.3	12.0	11.1	6.5
9. Mean starting salary	\$80	\$74	\$68	\$50	\$47	\$41
10. National ranking by other colleges	26	26	29	11	10	8
11. National test percentile	98	98	98	83	83	83
12. Placement of students	93%	92%	89%	75%	77%	81%
13. Student per faculty member	10.34	10.31	10.28	9.28	9.3	9.33
14. Teaching evaluations	5.76	5.81	5.85	5.41	5.34	5.31
15. Total books published	4	5	6	3	3	6

FORM A
East Coast College's "Balance Scorecard"

