

**Student Learning Outcomes Committee 2008
Department/Program Assessment Results Report**

Department/Program: Business Administration, Undergraduate Program
Degree/Program: BSBA (Common Goals)
Date Submitted: 4-1-08

The purpose of this report is to communicate the assessment activities that have taken place during the last academic year, as well as to convey how the results are being used *to improve student learning at the program level*. The report should be kept as succinct as is possible, while answering the following questions clearly and conscientiously:

I. Working from your assessment report of last year, please discuss some changes made or strategies implemented in response to last year's results.

Last year's assessment report discussed the assessment of two goals and their corresponding student learning outcomes:

Goal 1: Written and Oral Communication - Communicate effectively with individuals, teams, and large groups, both in writing and orally.

(The focus last year was on only written communication)

Learning Outcomes:

- Write well-organized and grammatically correct papers including letters, memos, case analyses, and research reports.

Goal 4: Essential Business Principles - Demonstrate an understanding of the major functional areas of Business.

Learning Outcomes:

- Describe basic concepts in each major functional area of business.
- Apply techniques and theories from various areas of Business to business situations.

Last year's report detailed the results of assessment of Goal 1 which suggested that while students' writing abilities were typically adequate that there was clearly room for improvement. Further, the report suggested that when students were given clearer instructions about how papers were to be evaluated that their writing improved. Based on these results the Undergraduate Committee of the College of Business sent a memo to all faculty members in the CBA urging them to develop more detailed instructions for their written assignments and also urging them to provide students with grading rubrics. The memo that was sent to the faculty is found in Appendix I to this report. Anecdotal follow-up to the memo suggests that many faculty members have adopted the use of rubrics for grading in their courses and are frequently providing these rubrics to their students when an assignment is made.

Also detailed in last year's report were the results of an annual assessment of Goal 4. As reported last year, students' command of essential business principles appears weakest in the area of statistics. Data documenting our students' weak performance was presented to various faculty constituencies via a Power Point presentation similar to the one used this year (Appendix III). This was done with the hope that the information might spur departments requiring only one rather than two statistics courses of their students to consider an increase to two. Further, it was hoped that the

information would spur serious discussion across the college of ways to improve our students' performance in statistics as well as other subjects. This rather weak response approach was taken because the Undergraduate Committee (which spearheads the assessment efforts for the BSBA Common Goals) does not have the power to require curriculum changes of the various departments in the college. In addition to disseminating the BAT results across the college, the Undergraduate Committee agreed to take a close look at the instrument being used to assess Goal 4 in an effort to more clearly determine its validity. This effort continued throughout the 2006 – 2007 academic year and is detailed later in this report.

II. Drawing upon the goals and objectives contained in the department/program student learning assessment plan, what was the focus of the department's student learning assessment for the past academic year?

- A. This section should list the student learning goals and objectives that were the focus for the report year (selected from your complete set of goals and objectives).
- B. It would also be helpful to note here the student learning goals and objectives that you intend to assess during the next year.

The College of Business Administration (CBA) has a set of common goals for all undergraduate students (since all students are in the B.S.B.A. program). Additionally, each major and specialization within the college has a set of goals specific to that major or specialization. This report focuses on the set of common goals. Assessment of goals specific to the major or specialization is reported separately.

There are four goals (each with corresponding student learning outcomes) that are common to the B.S.B.A program. They are:

Goal 1: Written and Oral Communication - Communicate effectively with individuals, teams, and large groups, both in writing and orally.

Learning Outcomes:

- Write well-organized and grammatically correct papers including letters, memos, case analyses, and research reports.
- Make effective oral presentations that are informative as well as persuasive, as appropriate.

Goal 2: Analytical and Critical Thinking Skills - Demonstrate effective analytical and critical thinking skills to make an appropriate decision in a complex situation.

Learning Outcomes:

- Collect and organize critical data and information to solve a problem.
- Find appropriate models and frameworks to analyze information and follow logical steps to reach an effective decision.

Goal 3: Ethical Reasoning - Distinguish and analyze ethical problems that occur in business and society, and choose and defend resolutions for practical solutions.

Learning Outcomes:

- Explain the various ethical dimensions of business decision making and the role of various stakeholders in this decision making.

- Assess the ethics of decision alternatives using different approaches and philosophies.
- Apply an integrative ethical decision model to cases drawn from various business sub-disciplines.

Goal 4: Essential Business Principles - Demonstrate an understanding of the major functional areas of Business.

Learning Outcomes:

- Describe basic concepts in each major functional area of business.
- Apply techniques and theories from various areas of Business to business situations.

The following table details the timeline for assessment of these goals:

GOAL	ASSESSMENT ACTIVITY
Goal #1 (Oral Communication Component Only)	2004-2005 (Discussed in Assessment Report dated 10-15-05)
Goal #1 (Written Communication Component Only)	2005-2006 (Discussed in Assessment Report dated 4-1-07)
Goal #2 (Analytic and Critical Thinking Skills)	2006-2007 (Latest results discussed in current report)
Goal #3 (Ethical Reasoning)	2007-2008 (To be discussed in 4-1-09 Assessment Report)
Goal #4 (Essential Business Principles)	Assessed Annually (Latest results discussed in current report)

The highlighted items in the table form the focus of B.S.B.A.'s common goal student learning assessment for the past academic year.

III. What information was collected, how much, and by whom?

- This section should briefly describe the methodology used to examine the targeted goals and objectives. Please attach relevant scoring rubrics, surveys, or other materials used to examine student learning to the back of the report, as Appendices.
- Please note that the expectation here is that programs will make use of *direct* measures of student learning outcomes.

Goal #2: Analytic and Critical Thinking Skills

This goal was assessed by a team of investigators led by Dr. Patricia Dintrone, former CBA Director of Assessment. Dr. Dintrone's complete report is attached as Appendix II.

Goal #4: Essential Business Principles

The College of Business Administration participated in the CSU Business Assessment Test (BAT) during Spring semester 2007. This is the fourth time the CBA has participated in the exam. The BAT exam consists of 80 multiple choice questions drawn from a pool of questions developed by a consortium of CSU business schools and administered through CSU Long Beach. The exam covers seven content areas deemed to represent the essential business principles that all undergraduate business majors should have mastered. The areas are: Accounting, Economics, Finance, Information Systems, Management, Marketing, and Statistics. The exam was administered during Spring 2007 in a majority of the MGT 405 sections¹. MGT 405 is the capstone course required of all students in the B.S.B.A. program. A total of 408 seniors took the exam. This represents 66.2% of the students enrolled in the capstone course in the Spring and 39.0% of the annual enrollment in the capstone course in

¹ The BAT is designed for a 75 minute class period hence could not be administered in MGT 405 sections that meet three times per week for 50 minutes per class period.

2006-2007. Exams were graded by the BAT Test Administrator at CSU Long Beach and results were sent to SDSU.

IV. What conclusions were drawn on the basis of the information collected?

- A. This section should briefly describe the results (in summary form) in regard to how well students have met the targeted goals and objectives. For example, what percentage of students met the objectives? Is this a satisfactory level of performance? What areas need improvement?
- B. Whenever it is possible to do so, please organize and present collected data by way of tables and/or graphs. [Note: the committee expects and welcomes both quantitative and qualitative data, so this suggestion should not be construed as seeking quantitative data only.]

Goal #2 Analytic and Critical Thinking Skills

Conclusions drawn based on the information collected for this goal are detailed in the full report of the assessment of the goal found in Appendix II.

Goal #4: Essential Business Principles

The average score earned by SDSU students on the BAT exam was 50.25% (40.2 of 80 questions). This represents a very slight (statistically insignificant) improvement from average performance when the exam was administered in Spring 2006 (mean: 50.10%). Average performance placed SDSU students third in campus rankings across the six CSU schools that administered the test in Spring 2007. Appendix III contains a short Power Point presentation that was used to present the results of the assessment to various constituencies in the College of Business.

Predictably, students majoring in a particular field did better in that sub-test than non-majors. Overall, students performed strongest in the content areas of Marketing and Information Systems and weakest in the content areas of Statistics and Finance. This is consistent with results from previous administrations of the exam. Since students are not allowed to use a calculator on the exam and since Statistics and Finance questions frequently involve some form of computation, the weak performance in these two subjects may arguably be attributable to factors other than student mastery of the concepts. Of note however is the similar weak performance on the Statistics sub-test in both 2007 and 2006. Performance in these two years represents a 9 - 10 percentage point drop from previous years on the Statistics sub-test. The test questions have been identical for all administrations of the test and calculators have always been banned. Based on these limited longitudinal results it may be speculated that our students' mastery of Statistics has worsened. A more detailed look at performance on the Statistics Sub-test (as presented in Appendix III) illustrates that the departments in the CBA that require their students to take IDS 301- *Statistical Analysis for Business* (hence, two statistics courses one lower division and one upper division) fare better than the departments that require only one lower division statistics course. Students who take more statistics (two courses rather than one) performed significantly better on the Statistics sub-test of the BAT than students who take less statistics (39.58% versus 34.83%).

In addition to the above consideration and conclusions drawn as a result of the BAT exam results, the Undergraduate Committee engaged in serious consideration of the validity of the BAT exam itself. The committee had found itself stymied in previous years in attempts to strongly suggest changes as a result of the BAT results because the

CBA faculty, as a whole, has little faith in the test's validity. The following activities were undertaken during the Spring 2007 semester by the Undergraduate Committee:

1. Committee members each took the questions from the BAT exam that pertained to their area of expertise and compared the questions to the student learning outcomes identified for the core course where the information relevant to essential business knowledge in that area should have been taught. The results of this analysis indicated that most BAT questions do address existing SLOs but in every topic area there are some SLOs which do not have corresponding questions.
2. Committee members also assessed the BAT questions they were responsible for in terms of Bloom's Taxonomy. The results of this analysis suggested that the breakdown of knowledge vs. comprehension and application level questions was variable with some topic areas offering a variety of question types while others offered only knowledge questions.
3. The committee requested an analysis of individual items on the exam. A point bi-serial analysis performed by Associate Dean Mary Wolfenbarger of CSU Long Beach identified 22 items on the 80 item test that are of questionable validity.

V. How will the information be used to inform decision-making, planning, and improvement?

- A. This section should describe the strategies that will be implemented for program improvement as a result of the conclusions drawn from the assessment activities.
- B. The program change may pertain to curricular revision, faculty development, student services, resource management, and/or any other activity that connects to student success.

Goal #2 Analytic and Critical Thinking Skills

The report found in Appendix II reports four recommendations that deal with ways to improve the analytic and critical thinking skills of our students. The Undergraduate Committee of the College of Business discussed these recommendations and decided that a memo would be sent to all faculty members in the CBA urging them to consider adopting the recommendations. The memo that was sent to the faculty is found in Appendix IV to this report. As a result of the memo a fair number of faculty members across the college expressed interest in learning more about the use of rubrics and rubric development. Hence, the CBA Assessment Committee developed a short "rubric primer" which was distributed to the CBA faculty along with examples of rubrics currently being used in the college. The Rubric Primer is found in Appendix V.

Further, it was recommended in the report that the CBA consider revising its methodology for assessing this goal as well as consider revising the goal itself. Consideration of these two recommendations will be taken up by the college Undergraduate Committee during Spring Semester 2008.

Goal #4: Essential Business Principles

While the Power Point presentation found in Appendix III was intended to inform the CBA faculty of the weaknesses found in our students' knowledge of essential business principles it is recognized that ongoing criticism of the BAT instrument provides a convenient excuse for not addressing these issues. Following the consideration of the test by the Undergraduate Committee, as described in the previous section, it was decided that three things would be done:

1. During the Spring 2008 administration of the exam, the pool of test takers will be split in two. One group will take the exam following the traditional CSU dictum of "no calculators" while the second group will be allowed to use calculators. A comparison of the performances of the two groups will be undertaken to determine whether the

calculator ban has a significant impact on performance in the quantitative sub-test areas of the exam.

2. We are working with the CSU consortium to improve the BAT test. For Spring 2008 administrations of the exam, Long Beach will report scores both with and without the 22 items identified as being of questionable validity.
3. The Undergraduate Committee is giving serious consideration to alternatives to the BAT as a methodology for assessing Goal 4. Discussions are currently underway regarding the pros and cons of a variety of alternatives including the development of an in-house exam, the use of a commercial exam offered by the Educational Testing Service, and movement away from a standardized exam to a simulation or project that would be developed to test essential business principles. No decision has yet been made.

Report completed by: Kathleen A. Krentler, Director of Undergraduate Programs

Date: March 27, 2008

APPENDIX I
Memo to faculty regarding student writing

September 29, 2006

Memorandum

To: CBA Faculty
From: Undergraduate Committee
Subject: Student Writing

During Spring semester 2006 an assessment of the writing skills of the college's undergraduate students was undertaken. The purpose of this memo is to share with you a brief description of the results of that effort and to offer some ideas that you may wish to consider incorporating in your classes as means of improving the written assignments you receive from your undergraduate students.

Student writing samples (drawn from capstone courses across the five CBA departments) were assessed on three criteria: planning, development, and mechanics. Results indicated that students were "Approaching Standards" in each of these areas. Specifically, this interpretation translates to the following:

- Planning: Written work has adequate beginning, development, and conclusion. Paragraphing and transitions are also adequate. Headings show writing plan.
- Development: The length of the written work is sufficient to cover the topic, and assertions are supported by evidence, cited by references and a conventional source list. No apparent plagiarism.
- Mechanics: Written work is relatively free of errors in word selection and use, sentence structure, spelling, punctuation, and capitalization.

It is interesting to note, however, that the range of performance across the samples provided from the departments was significant.

Based on the variation in performance and a careful consideration of the assignments the students were responding to, the Undergraduate Committee urges you to consider the following suggestions. Students write better when they are provided with a clear and detailed set of instructions for the assignment. Stronger and clearer student writing will result when instructions discuss expected writing style and specify the audience for the assignment so that students can tailor their document to that specific audience. It may also help if you specify documentation format and design (length, font, spacing).

Further, the assessment literature supports what was noted in this assessment of student writing: higher levels of writing are produced when students are provided (as part of the assignment) with a rubric that clearly defines the grading standards and expectations of the instructor. Such a rubric should identify the criteria on which an assignment will be evaluated and the expectations for the range of possible grades for each criterion. The Undergraduate Committee would be happy to provide examples of complete grading rubrics to anyone interested (contact Kathy Krentler).

APPENDIX II

**CRITICAL THINKING ASSESSMENT REPORT
COLLEGE OF BUSINESS ADMINISTRATION**

**FINAL REPORT
2006/2007**

Subcommittee Members:

Patricia N. L. Dintrone
Michelle Dean
Lois Olson

Summary

Procedures:

A rubric to assess the critical thinking represented in these papers was developed in consultation with the Director of Assessment, Dr. Kathleen Krentler. The rubric was designed to assess the outcomes of the Analytical and Critical Thinking Skills goal in the College of Business Administration undergraduate program assessment plan. A sample of 131 case write-ups was collected from three sections of Management 405 taught in Fall 2006.

The first set of 92 papers from two sections of 405 (same instructor) was assessed on the first day. The plan to assess the 39 papers from the remaining section on the second day was reevaluated, in consultation with the Director of Assessment, when it became apparent that the format of the papers made them unsuitable for a full assessment of critical thinking. The subcommittee, therefore, assessed a total of 92 papers, representing 21% of the 432 students enrolled in 405 in the Fall.

In Spring 2007, the rubric was revised in light of the Fall experience. A total of 83 papers from a single section of Management 405 taught in Spring 2007 was assessed.

Findings: Student learning

Students varied widely in their mastery of specific elements of critical thinking. For example, most of them were able to identify the main issue(s) in a case, either explicitly or implicitly (76% in Fall, 81% in Spring). Many of them, however, identified multiple issues without clearly specifying the main issue(s).

Student use of data was weak. Although most of the students cited data from the case in their analyses, the data were usually used in a descriptive manner and only about a quarter of the students each semester specifically used the data as the basis of their recommendations.

In general, then, while students understand the need to use the information presented to develop a recommendation, they are not quite sure how to do this and their recommendations seem to be based more on an intuitive approach to the problem than on analytical skills presented in their classes.

Findings: Process

The process used in 2006/7 to assess the Critical Thinking goal did not adequately measure the objectives specified in the goal. Limitations in the assignments used for the assessment resulted in key elements such as collecting data and using models and frameworks not being adequately addressed through this sample. The College will need to develop another model for assessing student mastery of the Critical Thinking goal. In addition, the Learning Objectives in the Critical Thinking goal should be expanded to include more elements of the critical thinking process.

Report

PROCEDURES

FALL

Source material and team

At the beginning of the Fall semester, Kathy Krentler, the Director of Assessment, surveyed the Management 405 courses to determine which of them require individual case write-ups from students. Three sections, taught by a total of two instructors, required an individual final case write-up, so these classes were targeted for analysis. These sections represented 131 (30%) of the 432 students enrolled in 405 in the Fall. The instructors agreed to allow Kathy to copy the final papers before they were graded. The instructors then read and graded the papers in the normal way, with no reference to the results of the assessment. Similarly, the assessment team was unaware of the grades awarded to each paper.

During the Fall semester Pat Dintrone, the former Director of Assessment, agreed to take the lead in working with the assessment team in reading and evaluating the papers. The other team members were Michelle Dean (Management) and Lois Olson (Marketing).

Rubric development

Pat and Kathy worked during the Fall to develop a rubric for Critical Thinking that would be appropriate to Business and to case analysis, and that would capture the elements specified in the Analytical and Critical Thinking goal for the College (Appendix A). Rubrics in the assessment literature and available online are generally intended for general education courses and are not business-specific. Two kinds of rubrics are generally used. The holistic rubric developed by Facione and Facione (<http://www.insightassessment.com/HCTSR.html>) is the most widely used and assigns a single score to a paper for its demonstrated critical thinking. The multiple criteria rubric, typified by the Washington State University model (<http://wsuctproject.wsu.edu/ctr.htm>) evaluates papers on each of several criteria. This approach was judged more useful in a case analysis, where students may display strengths in some areas and weaknesses in others. Since none of the existing rubrics was a close match to the College learning outcomes, the WSU rubric was adapted and four criteria were identified based on those outcomes: (1) Issue identification, (2) Use of evidence and data, (3) Models and frameworks, and (4) Conclusions and recommendations. Each criterion was assigned anchors representing four levels of performance: competent, developing, inadequate, missing.

Reading

The team met for two days in January to read and evaluate the papers. The first day the team held a training and norming session and then assessed 92 papers (approximately 1 page each) from two sections of 405 (same instructor; same case for all students). Each paper was read by two readers. Scores from different readers were compared. In a majority of the cases the two readers had scored at least one criterion differently. These papers were reviewed and a consistent understanding of each anchor established. The differences were worked out to produce a single score on each criterion for each paper. Results are presented in Appendix B. The other 39 papers were not read; see p. 8.

SPRING

Rubric revision

After the Fall assessment was completed, the team learned from the instructor that she had instructed the students not to include a full SWOT analysis in their papers. She said that she assumed that they would do this and use the results in their write-ups. The team therefore decided that the category of Models and Frameworks would have to be eliminated, since that looked for a specific use of a model. The team also revised the wording on some of the anchors in the remaining categories to be clearer in hopes of making them clearer and having greater agreement in the next round of reading.

In June the team met to read 83 one-page papers, all from the same section of 405 and all dealing with the same case. Each paper was read assessed by two readers. Once again, there were disagreements on more than half of the papers, which were discussed until a scoring consensus was reached. Results are presented in Appendix C.

FINDINGS

The numerical results of the assessment of the 92 papers in Fall (21% of the students in 405) and 83 students in Spring (14% of the 405 students) are presented in Appendices B and C. Scores on the criteria were generally consistent between the two semesters. Comments on individual criteria are as follows:

Criterion 1: Issue Identification

Students generally did relatively well on this in terms of the critical thinking process. Only 11% of Fall student and 8% of Spring students failed to identify some aspect of the case as the issue. In Fall, 53% explicitly identified the key issue of the case and another 23% implicitly identified it—that is, they discussed it without explicitly identifying it as the main issue. A total of 86% of the students, then, were able to discern the major issues of this case. Many of these students identified multiple issues in the case as key issues.

In Spring, the case did not have a single outstanding issue and students usually identified two or three key issues. Other than that, results were similar to Fall: 58% explicitly identified their key issue(s) and 23% implicitly identified them, for a total of 81%.

In each semester, 13% of the students either identified a multiplicity of issues without identifying any as primary or focused on a minor issue as key, indicating a lack of understanding of the case. It seems, therefore, that while students understand that they need to focus their analysis on a specific issue or issues, they are not always clear about which issues are primary and which are subsidiary. It is also possible that they wish to identify as many issues as possible in order to increase their chances of hitting the one that the instructor thinks is “correct.”

Criterion 2: Evidence and data

Virtually all of the students understood that they needed to use data to analyze the case. There were relatively few cases of students simply giving an opinion without at least some reference to the data: only 8% did this in Fall and 12% in Spring. However, their ability to use the data (as opposed to simply mentioning it) was much more limited. In both semesters, just under a quarter of the students (22% in Fall, 24% in Spring) were able to apply the data to their analysis.

In Fall, most of the student use of data consisted of reciting data relevant to the issue they had identified (43%) or irrelevant to it (27%), without any significant attempt to analyze it. In many

cases, the students simply gave a summary of the case data but did not use that data in their analysis. In the Spring group, 35% of the students mentioned facts that were potentially relevant to the issues they had identified but only described them, rather than using them in the analysis. An additional 29% cited data that were not relevant to the issues they had identified.

Criterion 3: Models and frameworks

In Fall the team noted that a significant majority (65%) of the students used no specific tools, models, or procedures in their papers. It was not that they did not know how to use the models. Only 3% used a clearly inappropriate model or used it in a patently incorrect way. But only 14% used a complete model or framework (such as a SWOT analysis) to analyze the case. Another 17% used part of a model but it was incomplete.

During the Spring semester the team learned that the instructions for the paper included an injunction not to include a complete SWOT (or other) analysis as a part of the paper. Rather, the students are expected to do such an analysis and use the results in their papers without including the analysis itself. While this went a long way towards explaining the findings in Fall, it also meant that the team could not assess papers for their use of these models as specified in the College learning objectives for Critical Thinking. This assessment criterion, therefore, was eliminated in the rubric revision for Spring.

Criterion 4: Conclusions and recommendations

Students understood that they needed to make specific recommendations. Less than 10% each semester failed to recommend specific courses of action. They had varied success in making recommendations that aligned with their data. The most common course (45% in Fall, 39% in Spring) was to make recommendations that were applicable to the case and dealt with the issues that had been identified, but which were not clearly based on the analysis. Only 26% in Fall and 28% in Spring made recommendations that were specifically based on their analysis of the data. 23% in Fall and 31% in Spring made recommendation that were unrelated to their analysis. The higher number in Spring may be related to the fact that students were more familiar as consumers with the company under discussion (McDonalds) than they were with the Fall case (a wine and spirits company), and, therefore, made recommendations based upon their own experience.

In almost no cases did the students deal with data that did not support their recommendation. This was most striking in the McDonalds (Spring) case, in which a large number of students recommended that McDonalds offer a healthier menu (based on changing customer demand mentioned in the case) but did not deal with the data given in the case that all of McDonalds' attempts to do that in the past had failed. Students were selective in their discussions of data and generally ignored those that did not support their conclusions.

In summary, students were able to take a large body of information and abstract an issue or issues that were important. They understood that they should use the data provided in making their analysis, but did not always demonstrate an ability to use the data for that purpose. Perhaps as a result of this, there was a strong tendency among students to arrive at recommendations based on intuition or personal experience rather than on the data provided.

RECOMMENDATIONS

Student Learning:

1. Business students are learning the basic critical thinking skill of formulating a problem statement in a case analysis. However, some do show a reluctance to specifically state the problem and many demonstrate a tendency to identify multiple issues. The former may be in part a writing problem, but both of them also seem to stem from a desire not to miss whatever the instructor feels to be the major issue.

RECOMMENDATION 1: Faculty should encourage students to make clear problem statements without hedging.

2. It was not possible from these samples to determine with confidence whether students were finding appropriate models and frameworks to analyze information as required in the College learning objective. However, anecdotal evidence from the reviewers indicated that most did not demonstrate a clear connection between any analysis they may have done and their conclusions. In addition, those who did an analysis generally all used the same analytical tool. In Fall, virtually every student who showed evidence of some analysis used a SWOT analysis. In Spring, many of the students used a SWOT analysis; some also used a 5-Forces analysis which is the same analysis used by a version of this case analysis that is available on-line.

RECOMMENDATION 2: Students should be asked to show their use of models and tools and to demonstrate a clear connection between those models and their analysis.

3. The link between evidence and recommendations is weak for most students. It seems from these cases that students are often not guided by the evidence. In most cases, citations of the evidence are more likely to be used to justify the selection of a problem statement than in the development of a solution. Students tend to make intuitive recommendations that are not necessarily supported by the evidence. The tendency is even more apparent when the students are more familiar with the context; it was more common for students to cite their own experiences/opinions/beliefs as support for their recommendations for the McDonald's case in Spring than it was for the winery case in Fall.

RECOMMENDATION 3: Faculty should model the use of data in developing solutions to cases and problems.

RECOMMENDATION 4: Students should be given opportunities to learn how to support recommendations with evidence by writing and revising these sections of their papers.

Assessment Process:

Problems with the assessment process were apparent during both reading sessions. Readers had difficulty aligning the rubric (designed to address the objectives) with the actual cases they were reading.

Finding an assignment to assess is a significant challenge. The majority of faculty in MGT 405 do not require students to write individual case analyses. While some majors have their own capstone courses as well, some do not require individual writing and some do not have the students do an assignment that would demonstrate critical thinking, as defined in the Critical Thinking goal.

Alignment of the assignment to the goal and objectives

The cases that were used in 2006/7 were not entirely suitable for this assessment. The Critical Thinking goal comprises two outcomes:

- Collect and organize critical data and information to solve a problem.
- Find appropriate models and frameworks to analyze information and follow logical steps to reach an effective decision.

The rubric essentially covered the second part of the first outcome: organizing information to solve a problem, and part of the second part of the second outcome: follow logical steps to reach an effective decision. The assignment did not require students to collect data (no outside research was expected), nor to determine what data would be necessary to solve the problem (all the necessary data was assumed to be in the case). Students did have to select among available data in analyzing the case and much of the assessment process consisted in evaluating their ability to do that.

The first part of the second objective “Find appropriate models and frameworks to analyze information,” was a particular problem and it turned out to be impossible to assess student mastery of this objective. As noted above, the cases that were assessed included instructions to the students not to explicitly apply models in their analysis. While a few students included a framework analysis in an appendix, most did not.

On the other extreme, the original sample in Fall included 39 cases from a different instructor. In this class the instructor had specified to the students that they had to have a problem statement and, more importantly, had listed several specific models/frameworks that they had to use in analyzing the case. It appeared, therefore, that the process of assessment would become a grading process (how well did the students follow directions?) and a content evaluation (how well did they understand the models?), rather than an assessment of how well they had thought through the problem on their own. In addition, if the papers were scored on the rubric, the scores on the directed papers would not be commensurate with those on the papers where students needed to follow these steps spontaneously. During the norming session it became clear that these papers would be difficult to assess properly using the rubric. After consultation with the Director of Assessment, the team decided not to assess the second set of papers.

Compounding the difficulties presented by the assignments was the fact that all of the papers were from a course, Management 405, in which a significant amount of time is spent teaching students about specific models and frameworks for approaching strategy. Students in this course are naturally expected to choose from among the models presented in the course when analyzing cases. Students, therefore, are choosing from a very small array of models in this case analysis, any or all of which would probably be appropriate, rather than “finding appropriate models and frameworks” from the totality of their coursework, as envisioned in the objective.

Students were expected to use the data (and any analysis they had done) to support a conclusion, which is a part of “following logical steps to reach a decision.” However, the assessment would have been improved had the students presented their reasoning (analysis) for their conclusions.

Writing a usable rubric was another problem. In both scoring sessions, considerable time had to be devoted to deciding how the rubric would be applied to the specific case being scored. Even

with training, the raters had difficulty applying the rubric to cases and differences in scoring, some of them significant, were common, and required discussion between the raters to resolve.

RECOMMENDATION 5: The College should seek a better source of information for critical thinking analysis. Two possibilities are:

1. Select a case for students to analyze that is specifically designed to allow them to demonstrate critical thinking skills. This would most likely be a case that had a single overarching problem that might be approached in different ways. The assignment would need to allow students sufficient space to develop models and to defend their conclusions and would probably be longer than the 1-page analyses used in 2006/7.
2. Use an assessment instrument other than a MGT 405 case analysis, such as a simulation or a test, to assess critical thinking. Such an instrument would need to be designed to enable students to demonstrate all three elements of the goal: collecting data, organizing it, and applying models to it to reach a conclusion.

Adequacy of the Critical Thinking Goal

The Learning Outcomes in the Critical Thinking goal, as currently written, do not include much of what is commonly called “critical thinking.” Critical thinking is generally assumed to include such aspects as the evaluation of evidence for bias and reliability, logical reasoning ability, and consideration of evidence that does not support a proposed conclusion. The Learning Objectives present a linear process of collecting data, plugging them into an appropriate model, and arriving at a conclusion, rather than a reflective process of selection, evaluation, and argumentation. A rubric based on the current Critical Thinking Goal is unlikely to capture Critical Thinking as generally defined in the literature.

RECOMMENDATION 6: The College should revise the Learning Objectives of the Critical Thinking goal to more comprehensively capture the concept of Critical Thinking and then develop a general rubric based on these objectives.

APPENDIX A (to Appendix II)

College of Business Critical Thinking Goal

Analytical and Critical Thinking Skills - Demonstrate effective analytical and critical thinking skills to make an appropriate decision in a complex situation.

Learning Outcomes:

- Collect and organize critical data and information to solve a problem.
- Find appropriate models and frameworks to analyze information and follow logical steps to reach an effective decision.

APPENDIX B (to Appendix II)

Results of Fall assessment:

CRITICAL THINKING RUBRIC		Score	
Issue Identification			
4	Explicitly identifies the key issue(s)	49	53%
3	Implicitly identifies (discusses) the key issue(s)	21	23%
2	Identifies subsidiary issues as key	12	13%
1	Fails to identify issue(s) or question(s)	10	11%
Use of evidence and data			
4	Interprets/analyzes data in a way that improves understanding of case	20	22%
3	Cites data and uses it to analyze case	40	43%
2	Mentions/cites data but fails to apply it to case issues	25	27%
1	Fails to use data provided; provides little or no support for analysis	7	8%
Models and frameworks			
4	Explicitly applies models or frameworks to case analysis	13	14%
3	Analyzes case using concepts from models or frameworks	16	17%
2	Uses models/frameworks inappropriately or incorrectly	3	3%
1	Uses no models or frameworks to analyze case	60	65%
Conclusions and Recommendations			
4	Recommends and defends a conclusion based on the analysis	24	26%
3	Recommends a solution congruent with the analysis	41	45%
2	Recommends a solution not congruent with the analysis	21	23%
1	Does not offer a specific recommendation/conclusion	6	7%

APPENDIX C (to Appendix II)

Results of Spring assessment

CRITICAL THINKING RUBRIC, REVISED		Score
Issue Identification		
4	Explicitly states the key issue(s)	48 58%
3	Implicitly identifies (discusses) the key issue(s)	19 23%
2	Identifies subsidiary issues as key	11 13%
1	Fails to identify issue(s) or question(s)	5 6%
Use of evidence and data		
4	Selects only relevant data and discusses their application to the case	20 24%
3	Cites data/facts and uses at least some of them in discussion of case	29 35%
2	Mentions/cites facts from case but fails to apply them to case issues	24 29%
1	Fails to use data provided; provides little or no support for analysis	10 12%
Conclusions and Recommendations		
4	Makes a recommendation that addresses the identified key issue(s) and is explicitly based on the analysis	23 28%
3	Recommends a solution that addresses the key issue(s) and is congruent with the analysis	32 39%
2	Recommends a solution not supported by the analysis	26 31%
1	Does not offer a specific recommendation/conclusion	2 2%

APPENDIX III
Business Assessment Test Results – 2007

General Method

- 80 Multiple Choice Qs covering all business topics
- Administered to 1,073 test takers on 6 CSU campuses during spring semester 2007 (down from 8 campuses in 2006)
- Questions come from a pool of questions developed across the CSU system, Qs have not varied since 2004
- No calculators allowed

SDSU Method

- Exam administered in all sections of MGT 405, during regular class time
- 408 students took the exam (38% of total sample – largest, by far, of all campuses).
- All students received some form of incentive though method varied
 –Not true with all other CSU campuses

Average Performance

	All CSU	SDSU
Mean	39.23 (49.04%)	40.2 (50.25%)
Median	38.97 (48.71%)	40.14 (50.18%)
High Score	68 (85.0%)	62 (77.5%)
Low Score	13 (16.25%)	14 (17.5%)

Comparative Statistics

CAMPUS	MEAN
#1 (Tie)	41.26
#1 (Tie)	41.26
#3 SDSU	40.2
#4	38.94
#5 (Tie)	35.94
#5 (Tie)	35.94

SDSU Subject Area Results

Percent of questions answered correctly within each subject area

	All	Majors	Non-Majors
Marketing	61.05	67.22	59.50
MIS	59.01	91.67	57.61
Mgmt	55.75	58.38	55.04
Accounting	50.39	63.21	48.25
Business Law	50.03		
Economics	49.54		
Finance	40.91	51.43	37.35
Statistics	37.23		

A closer look at statistics . . .

- Overall Performance: 37.23%
- 301 Non-Takers 34.83%
 – (FIN, FIN SVC, IB, IS, RE)
- 301 Takers 39.58%
 – (ACC, MGT, MKT)
 – Among 301 Takers:
 - MKT (requires "C") 44.43%
 - Others 36.83%

SDSU Longitudinal Comparisons

	2007	2006	2005	2004
Mean	40.20 (50.25%)	40.08 (50.10%)	40.20 (50.25%)	40.50 (50.63%)
Median	40.14 (50.18%)	40.14 (50.18%)	41.62 (52.03%)	41.00 (51.25%)
High Score	62 (77.5%)	62 (77.5%)	62 (77.5%)	61 (76.25%)
Low Score	14 (17.5%)	14 (17.5%)	21 (26.25%)	17 (21.25%)

SDSU Longitudinal Comparisons By Subject Area

	2007	2006	2005	2004
Marketing	61.05%	63.23%	57.82%	58.25%
MIS	59.01%	60.41%	60.81%	59.64%
Mgmt	55.75%	55.20%	54.79%	54.39%
Accounting	50.39%	49.71%	51.48%	51.28%
Bus Law	50.03%	49.61%	52.54%	52.00%
Economics	49.54%	48.62%	49.63%	49.89%
Finance	40.91%	41.67%	40.60%	40.37%
Statistics	37.23%	36.66%	46.64%	45.91%

APPENDIX IV
Memo to faculty regarding critical thinking

October 9, 2007

Memorandum

To: CBA Faculty
From: Undergraduate Committee
Subject: The Critical Thinking Skills of our Undergraduates

During the 2006-2007 academic year assessment of the critical thinking skills of our college's undergraduate students was undertaken. The purpose of this memo is to share with you a brief description of the results of that effort and to offer some ideas that you may wish to consider incorporating in your classes and assignments as means of improving the critical thinking skills of your undergraduate students.

Our students' abilities to think critically were assessed using a sample of case analyses prepared by individual students in MGT 405, the capstone strategy course, which is required of all undergraduate students in the college. Case analyses were assessed using three criteria: ability to identify key issues/problems, ability to use evidence and data to analyze the identified issues/problems, and ability to draw conclusions and make recommendations based on analysis. Results indicated that our students are better at identifying problems than they are at analyzing them or drawing appropriate conclusions. Specifically:

- 53-58% of students assessed demonstrated an ability to explicitly identify key issues in a case study.
- 22-24% of students assessed demonstrated an ability to interpret and analyze data presented in a case study in a way that improves understanding of the case.
- 26-28% of students assessed demonstrated an ability to draw and defend a conclusion and make recommendations based on their analysis of the case.

The percentages reported here appear to indicate that our students' abilities to demonstrate these various aspects of critical thinking, even as they are drawing to the conclusion of their degree program, are weak.

There are things that each of us can do in our classes that will collectively lead to improved critical thinking skills amongst our students. The Undergraduate Committee strongly urges you to consider the following suggestions.

When assigning case study analyses to your students:

- Encourage students to make clear problem statements without hedging.
- Require students to show their use of procedures, models and tools and to demonstrate a clear connection between those models and their analysis.
- During class, model the use of data in developing solutions to cases and problems.
- Teach students to distinguish between relevant and irrelevant data.
- Give students the opportunity to learn how to support recommendations with evidence by allowing them to revise these sections of their papers.

Further, we encourage you to consider assigning exercises to your students that:

- Require them to collect data from outside sources (case studies typically provide students with all data and students are encouraged not to seek additional information).

- Require students to organize and evaluate data sets in a way that aids them in applying the data to a specific problem.

Finally, as recommended by the Undergraduate Committee last year as a means of improving student writing, we strongly encourage you to grade assignments of all types with a rubric that clearly defines your grading standards and expectations. Such a rubric should identify the criteria on which an assignment will be evaluated and the expectations for the range of possible grades for each criterion. With respect to the enhancement of critical thinking skills these criteria should include the various components of strong critical thinking (issue identification, interpretation and analysis of data, conclusions and recommendations based on analysis). The use of such a rubric will not only enhance students' skills but it makes the job of grading easier! The Undergraduate Committee would be happy to provide examples of complete grading rubrics to anyone interested (contact Kathy Krentler).

APPENDIX V
Rubric Primer sent to CBA faculty

Memorandum

October 16, 2007

To: CBA Faculty
From: CBA Assessment Committee
Subject: Grading Rubrics

What is a rubric?

A rubric is a scoring/grading tool that's generally used for subjective assignments. In subjective assignments, rubrics help create a certain level of objectivity. As a result, learners are clearer about the expectations prior to submitting the assignment and are clear about their areas of weakness and strength when the assignment is returned. Rubrics help instructors evaluate levels of performance and communicate with students without the need to write extensive comments on an assignment.

Benefits of rubrics

- Communicate expectations to students: A rubric tells students what is expected of them, the grading criteria, what counts and what doesn't, and how their work is graded.
- Bring objectivity to subjective scoring.
- Allow for easy scoring and recording of it.
- Communicate grades to students: A graded rubric helps students understand how they were graded and what their areas of strength and weakness were.

Creating and Using Rubrics

Have you ever heard that a little hard work up front saves time in the end? Well this is definitely true in the case of rubrics. Rubrics are basically a simplified way to grade a complicated assignment. For example, when you are grading an essay, how do you decide whether it gets an A or a B? What about if you are assigning number grades to the essay? What's the difference between a 94 and a 96? It seems much easier not to do the extra work to create a rubric. However, once the grading begins, it's clear that the use of a rubric makes things easier. For one thing, rubrics save time because you simply have to look at the rubric and mark off points.

With a rubric that is created beforehand and shown to students, they will produce better quality work. They know what is expected. It saves problems afterwards because the students knew what was required, and they can see where they had points taken off.

Assessment literature supports that better assignments are produced when students are provided (as part of the assignment) with a rubric that clearly defines the grading standards and expectations of the instructor. Such a rubric should identify the criteria on which an assignment will be evaluated and the expectations for the range of possible grades for each criterion.

To build a rubric you need to identify the criteria that are important to the evaluation of the assignment. For each criterion you then need to identify the various levels of mastery associated with that element. This will be done on a multi-point scale. It is a good idea to provide as much description of what a particular point on the scale means as possible. There is no magic number for the scale. Three point scales (Exceeds Expectations, Meets Expectations, Below Expectations) are common but four or five point scales also work fine. An interesting site that will help you build your rubric is found at: <http://www.2learn.ca/construct/rubric/tlcrubric.html>.

When using a rubric for grading, make sufficient copies in order to grade each student's assignment with the rubric (by circling scale points) and then attach the rubric to the student's assignment when it is returned. The student now has detailed feedback on the strengths and weaknesses of his or her assignment without you having to write a lot.

[Some material from above adapted from:

<http://712educators.about.com/cs/rubrics/a/rubrics.htm>

[http://www.rcampus.com/wikishowc.cfm?tt=rubric&tm=rubrics&sm=help&\]](http://www.rcampus.com/wikishowc.cfm?tt=rubric&tm=rubrics&sm=help&)

Examples of Rubrics

The following site: <http://trc.ucdavis.edu/trc/ta/tatips/rubrics.pdf> provides an example of a generalized rubric that was used for a term paper assignment. It uses a five point scale that describes the points in terms of letter grades (A-F) and is interesting to take a look at but is not specific to a business school assignment.

A public gallery of business rubrics that can be used or adapted can be found at:

<http://www.rcampus.com/rubricshellc.cfm?mode=gallery&sms=publicrub&sid=4&>. These are quite general but may give you some ideas.

Rubric use in the SDSU College of Business is growing as we all discover that the approach really does provide for easier and more objective grading as well as greater feedback to students. The three examples with this memo are rubrics being used this semester by your CBA colleagues. They include one used in a lower division undergraduate course (IDS 290), one used in an upper division course (MKT 370), and one used in a graduate capstone course (BA 795). Clearly the value of grading with a rubric spans all levels.