

**Student Learning Outcomes Committee 2009
Department/Program Assessment Results Report**

Department/Program: Business Administration **Degree/Program:** MBA
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The purpose of this report is to communicate the assessment activities that have taken place during the 2009/2010 academic year and convey how the results will be used to improve student learning in the MBA program at the College of Business Administration.

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

The Graduate Committee used the previous academic year to revise the overall MBA assessment plan. The assessment plan revisions sought to more appropriately match the assessment instruments and activities with the newly implemented MBA curriculum.¹ Moreover, the plan resolves the issues arising from reliance on group as opposed to individual work for assessment purposes.

The changes to the plan include minor revisions to the Student Learning Goals and significant revisions to assessment activities. Based on the updated plan, the following assessment activities and instruments were developed, piloted, or implemented this year.

To address the challenges in analyzing assessment evidence provided by different instructors (in different formats and at different times), an exam was created to evaluate *Goal 1-Develop the solid foundation in theoretical concepts and managerial skills needed to lead business organizations*. This exam is an improvement over prior instruments used to assess Goal 1 because it provides direct assessment of learning outcomes at the individual level. The exam was administered in the MBA capstone course (BA 795) during Spring 2010, and will be administered every third year per the planned assessment cycle.

The Committee also examined options to assess *Goal 4- Acquire the capacity to formulate and communicate strategies to solve business problems and pursue opportunities*. This goal includes four specific learning outcomes: *4.1: Analyze a business problem in new and unfamiliar circumstances through the integration of relevant disciplines; 4.2: Formulate strategies to solve business problems and pursue opportunities; 4.3: Make professional oral presentations; and 4.4: Write clear and effective formal reports*. During this process the Committee reviewed the content of multiple courses including: MGT 626 (Competitive Analysis of Industries), MGT 723 (Seminar in International Strategic Management), MGT 743 (Seminar in Business Plan Development), Fin 653 (Case Studies in Financial Management), Fin 641 (Financing the Emerging Firm), IDS 754 (Seminar in Operations Strategy), and MKTG 779 (Advanced Marketing Strategy) in an attempt to identify assignments that might serve as assessment instruments. The Committee also evaluated a computer simulation (CapSim) used in MGT 626 for use as an assessment tool. Analysis of these courses suggests that the variation in the

¹ Curriculum changes implemented in Fall 2008 regarding core course requirements were driven by market trends and student feedback. These changes also attempted to close the loop by increasing the credit units from 2 to 3 in all core course and streamlining theme course requirements. To improve student learning in the theme area of technology management, course topics were revised. To improve student learning in the theme area of ethics, the list of courses eligible to fulfill this theme was refined.

structure of assignments across the courses introduces significant challenges to using embedded assignments for assessment of Goal 4.

The Committee has determined the two options that would offer the greatest consistency for assessment over time are: (1) the individual assessment module in the CapSim, or (2) the development of a specific individualized assessment instrument. The Committee is piloting an individualized assessment activity for Goal 4 in BA 795 during Spring 2010.

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?

Goal 1 for the MBA program is that students develop the solid foundation in theoretical concepts and managerial skills needed to lead business organizations. The Student Learning Outcome associated with this goal is that students are able to apply concepts and decision models in financial accounting, statistics, organizational behavior, finance, economics, marketing, and production to make business decisions. The content associated with Goal 1 is delivered in the following MBA core courses:

BA 650 – Financial Reporting and Analysis I
BA 651 – Organizational Behavior
BA 652 – Statistical Analysis
BA 653 – Managerial Economics
BA 655 – Marketing
BA 662 – Operations Management
BA 665 – Financial Management I

The requirement to complete one or more of these courses may be waived if a student in the MBA program has recently completed an equivalent course with a satisfactory grade or passes a challenge exam. An exam was administered to assess student learning relative to Goal 1. The results of this assessment activity provide the core content of this report.

SMBA

As noted in last year's (2009) assessment report, the Sports Master of Business Administration (SMBA) program closely parallels and is indeed simply a specialization within the CBA MBA program. Because the SMBA program is a stand-alone program that marginally modifies some of the MBA goals and student learning outcomes (to address the specific industry upon which the program focuses) and requires some modification in terms of data collection approaches, a similar but unique assessment plan for SMBA was developed and reported in the 2009 annual assessment report. Due to the timing of the cohort beginning and classes within the SMBA cohort, the first data collection for assessment purposes in the program will occur in June 2010. Hence, assessment of the SMBA program will be reported on in next year's (2011) report.

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

As part of assessment activity for the Fall 2009/Spring 2010 academic year, the Graduate Committee gathered data from two sources: individual exams and student surveys regarding the core courses at the College of Business.

Assessment Exam. An assessment exam was developed by the Graduate Committee in conjunction with faculty teaching the MBA core courses at the College of Business. A committee member from each functional area met with faculty within his or her department and generated a set of exam questions. These exam questions were presented to the Graduate Committee for review over the Spring 2009 semester. A set of items were selected for inclusion in a pilot exam that was administered Fall 2009. The pilot exam consisted of twenty-one questions from each functional area distributed across three different exam versions. The exam was designed to assess students' retention of knowledge and determine whether they are able to apply concepts and decision models in financial accounting, statistics, organizational behavior, finance, economics, marketing, and production to make business decisions without specific preparation for the exam or access to any reference materials except a formula sheet.

The pilot exam results were analyzed and items were identified for revision. Specifically, items with confusing stems and/or distracters were modified. These efforts resulted in the completion of a finalized assessment instrument that was administered to 89 students in the MBA capstone (BA 795) February 2010.

Students' performance on the exam provides direct evidence on their achievement of Goal 1 and its associated learning outcomes. The three performance benchmarks the committee set were: (1) students are judged to have met expectations if 50% of the items or greater were answered correctly, (2) students are judged to have marginally met expectations if 49%-45% of the questions were answered correctly, and (3) students were judged not to have met expectations if 44% or fewer questions were answered correctly. The benchmarks were set under the assumption that several semesters had passed since the students had completed the core courses, they did not have access to reference materials during the exam, and students were not asked to prepare for the exam. Eighty-seven percent of students completing the exam met performance expectations. Three percent of students marginally met expectations. Ten percent did not meet expectations.

A regression model was developed to explore factors that might serve to promote or hinder performance on the exam. The independent factors included in the model were the MBA Program Admission Index (based on GPA and GMAT), current GPA, time taken to complete exam, and number of core courses completed in the MBA program (completed 3-6 core courses or completed 7 core courses). Validating the instrument, current GPA significantly predicts exam performance.

The newly implemented MBA program allows students to waive core courses. To evaluate whether the number of core courses completed in the MBA program impacts student learning, a logit model was estimated with the binary dependent variable on the assessment exam score as (1) meets expectations (50% or greater) or (2) does not meet expectations. The model included the same variables as the regression analysis. Consistent with the basic regression analysis students' GPA is statistically significant. However, the number of core courses completed is not significant in the logit analysis.

Additionally, a univariate analysis of exam score shows that the means of the exam scores are not statistically different when categorized by the number of core courses completed. However, an analysis of a subset of the data using the regression model suggests that there is a positive relationship between exam score and completing all of the core courses, if performance on the exam was 50% or greater. The number of core courses completed can help explain the exam score for *students who met learning expectations* but does not explain performance when students fail to meet learning expectations. Students falling in the "did not meet expectations"

category generally took all 7 core courses. A finding that the number of core courses taken distinguished students who met learning expectations from those that did not would imply that the standards for waiving core courses were too liberal. These results suggest that the rules on waiving the core course do not impact whether a student meets expectations in achieving Goal 1. Thus, an implication of this analysis is that the requirements for waiving core courses seem to be appropriate.

Performance in specific functional areas was also explored. While the majority of students meet expectations in their exam performance, analysis of the functional areas suggests potential opportunities to improve learning. On average, exam performance was lowest in the areas of Financial Reporting and Analysis (BA 650), Managerial Economics (BA 653), and Financial Management (BA 665). However, it is important to note these topics are generally the most challenging for students.

Performance on the Financial Reporting and Analysis I (650) portion of the exam was reasonable with, on average, 54% of the students answering each question correctly. The lowest scores were observed for items that related to indentifying and describing accounts and account classifications presented in the principal financial statements. In particular, classifying the cash flow effects of business transactions (i.e., Version A, Q7; Version B, Q7; Version C, Q6) was the most difficult topic for the students. This topic is generally difficult for students because it requires an in-depth understanding of the nature of business transactions and the associated accounting treatment. These assessment results suggest greater emphasis needs to be placed on analyzing and classifying cash flows consistent with professional accounting standards (e.g., U.S. Generally Accepted Accounting Principles [GAAP]; International Financial Reporting Standards [IFRS]).

Performance on the Organizational Behavior (BA 651) portion of the exam was acceptable, with on average, 70% of the students answering each question correctly. The lowest scores were observed for items that required student knowledge of specific terminology related to course material (e.g., Version B, Q11; Version C, Q14), rather than comprehension or application of course material. This suggests that while students can apply particular concepts, they may be less likely to remember the specific vocabulary associated with those concepts. The Committee will work with core course faculty to determine the extent to which familiarity with specific vocabulary terms should be considered "on board" knowledge once students finish the MBA program.

Performance on the Statistical Analysis (BA 652) portion of the exam was reasonable with, on average, 59% of the students answering each question correctly. The lowest scores were observed for items that related to the selection of appropriate graphs for various types of data (i.e., levels of measurement and continuous vs. discrete data), developing confidence intervals about the mean, understanding the applications of Tchebycheff's theorem for the two-sigma and three-sigma rules, differentiating between positively and negatively skewed distributions (i.e., skewed to the right vs. skewed to the left, and the relationship between the mean and the median in such situations), and understanding the development and use of dummy variables in multiple regression models, especially for utilizing nominal level data. (i.e., Version A, Q17; Version B, Q16, Q19, Q20; Version C, Q21).

Performance on the Managerial Economics (BA 653) portion of the exam was reasonable with, on average, 50% of students answering each question correctly. The lowest scores were observed for items that related to market structure (e.g., Version A. Q26, Q27; Version C Q27, Q28). This topic is generally difficult for students because it requires the ability to evaluate

pricing and other competitive strategies in the context of the structure of a firm's market. These assessment results suggest that the introduction of more exercises on this topic to the core course or a review may be valuable.

Performance on the Marketing (BA 655) portion of the exam was acceptable with, on average, 70% of students answering each question correctly. The lowest scores were observed for items related to marketing strategy/mix (segmentation, pricing, and distribution) and research (e.g., Version A, Q34; Version B Q29, Q32, Q35; Version C Q32, Q33). This suggests an integrative component or review of strategy and the marketing mix would be useful at some point in the program. It also suggests that additional emphasis on research methods during the MBA program may be valuable.

Performance on the Operations Management (BA 662) portion of the exam was reasonable with, on average, 60% of the students answering each question correctly. The lowest scores were observed for items that related to terminology and specific calculations (i.e., Version A, Q42 ; Version B, Q36, Q42 ; Version C, Q38, Q40, Q42). The introduction of more exercises on these topics to the core course or a review may be valuable. The Committee will work with core course faculty to determine the extent to which familiarity with specific terms and calculations should be considered "on board" knowledge once students finish the MBA program.

Performance on the Financial Management I (BA 665) portion of the exam was reasonable with, on average, 56% of the students answering each question correctly. The lowest scores were observed for items that related to identifying relevant cash flows for capital budgeting projects (i.e., Version B Q47 ; Version C, Q47) and identifying various long-term sources of funds (Version A, Q48). The introduction of more exercises on these topics to the core course or a review may be valuable.

Student Surveys. To complement and triangulate the individual exam assessment data, survey feedback regarding the extent to which students perceived the core courses added to their knowledge base provides an indirect measure of the Student Learning of Goal 1.

The survey was administered to graduates of the MBA program during the Fall 2009 semester. On average, about 130 students graduate each semester; and 77 of the Fall 2009 graduates completed the survey. This instrument requires that students provide feedback on their experiences in the MBA program. As part of the survey graduates rated the value or quality of specific components of the MBA Program such as their core courses on a seven-point scale (1=added nothing and 7=added a great deal). Across all core courses the mean response was greater than 4. These ratings provide an indirect measure of achievement in terms of the learning outcomes. The mean response for each core course is displayed in Chart 1. Overall, students feel the core course content added to their knowledge base and professional goals.

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

The following conclusions can be drawn from the analysis of the data and review of the assessment process.

Overall students are meeting expectations in terms of learning relative to Goal 1 in the MBA program. The curriculum changes that allow the waiving of core courses have not negatively impacted student learning. The guidelines appear to be an appropriate instrument to determine eligibility to waive a core course. However, it does appear that students would benefit from introducing a review or integrative component into the MBA program curriculum to improve performance relative to certain topics.

Opportunities to improve learning relative to Goal 1 might include:

- **Financial Reporting and Analysis I:** greater emphasis on or a review of analyzing and classifying cash flows consistent with professional accounting standards.
- **Organizational Behavior:** a decision must be made whether a review of specific terminology toward the end of the program would be useful
- **Statistical Analysis:** reviewing the context and quantity of the student learning objectives currently identified, providing more practice on the selection of an appropriate graph for the particular type of data being analyzed, further elaborating on the concepts of skewness, confidence intervals, Tchebycheff's theorem, and more practice on the use of dummy variables in multiple regression
- **Managerial Economics:** additional exercises or a review of evaluating pricing and other competitive strategies in the context of the structure of a firm's market
- **Marketing:** a review of strategy and the marketing mix as well as additional emphasis on research methods during the MBA program
- **Operations Management:** additional exercises relevant to completing calculations and a review of certain terminology
- **Financial Management I:** additional exercises on relevant cash flows for capital budgeting projects and identifying long-term sources of funds

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

Given that GPA correlates highly with performance on the assessment exam, the Graduate Committee is confident in the validity of this assessment instrument and will continue to administer this exam per the planned assessment cycle.

The Graduate Committee will work to evaluate review or integration opportunities that may be introduced into the MBA curriculum to improve student learning related to Goal 1 and improve learning in those specific topics from the core courses where performance was weakest.

Phase one of this evaluation will involve re-administering the assessment exam in Summer 2010 to collect additional data. This additional data will allow the Committee to extend the analysis in several ways. First, the impact of switching from 2 to 3-unit core classes (a change resulting from the newly implemented MBA Curriculum) will be explored. The evaluation will help determine whether the additional time for review and integration in the 3-unit version of a course helps students perform better than those who took the 2-unit course. Second, students' performance at the functional level will be statistically related to whether the core course in the functional area was completed. The results can be used to fine tune the standards used to waive a core course requirement at the functional area level.

Phase two of this process will evaluate the degree to which Student Learning related to Goal 1 is achieved during the core course but diminishes over time. Faculty members teaching the core courses that provided the initial set of questions for the assessment exam are being asked to react to the exam results related to their specific functional area. Additionally, these faculty members are embedding some of these questions in their course examinations. The comparisons between student performances on the assessment exam questions upon completion of the core versus completion of the program will inform the Committee whether

performance issues are related to activity and experiences within the core course or are a function of forgetting as students move through the program. This analysis will help us choose between recommending changes in core courses or building in components later in the curriculum to reinforce material.

Phase three of this process will use the data collected from Phases one and two to determine the most appropriate option for review and integration. Options under consideration include online reviews, review “boot camps,” and an integrative strategy course.

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TABLE 1

Extent to which Graduating MBA students perceive that Core Course Content Added to Their Knowledge Base and/or Professional Goals

