

# **ACCOUNTING MAJOR PROGRAM ASSESSMENT: IMPROVING CURRICULUM PERFORMANCE WITH MAJOR SPECIFIC EXIT EXAMINATIONS**

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## **ABSTRACT**

U.S. business schools fail to lead in advocating culminating assessment devices in their undergraduate programs. Successes at the secondary level both in the United States and abroad suggest that much more could be done in higher education, especially in the practical professions including accounting. This paper describes the efforts of one university in developing a major assessment instrument delivered to all of its graduates in its BBA accounting program, and suggests improvements on its five-year experience as to how curriculum can be better measured and improved. Well-orchestrated efforts by faculty in developing and modifying a comprehensive curriculum instrument over time can generate substantial gains for both teachers and learners.

## **INTRODUCTION**

Regional accreditation bodies in the United States, and international accreditation associations such as AACSB, have been promoting faculty activities for work on student success in knowledge retention devices, assurance of learning, and assessment controls (Martell & Calderon, 2005; AACSB, 2006). While the ETS has developed a major field test examination, there is little else available for universities at the standardized level to employ. Needed is an instrument that focuses on the major area, accounting, and allows for subject (course) and item analysis over time.

## **RESEARCH ISSUES**

The need for analysis of strength of the accounting major is especially important as accounting is clearly a professional distinction within B-Schools much less blurred than other disciplines. (AAA, 1986; Arthur Andersen, et al., 1989). Employers seek graduates that can turnkey as much material as soon as possible (AECC, 1990; AACSB, 2006; AICPA, 2006). In both public accounting and private industry, the expectation continues that recruits should be able to converse with the common body of knowledge of the profession.

## **INSTRUMENT DESIGN**

The major specific exit exam (MSEE) in accounting studied in this paper was originally conceived as being administered every other semester in the capstone strategy course to the BBA program in the AACSB accredited College of Business at this mid-size public university in the Southeast. In this way, students from the other majors—management, marketing, supply chain, and general business would each have their own exam. In the alternating semesters, the ETS major field test was planned to be administered. Since the course housing this terminal testing experience was not accounting, special arrangements had to be made with lock-down computer controls, adherence to time, and procedures to insure proper test to proper student inside of controlled library facilities. It was believed by the faculty that both the ETS and the MSEE could not be run in the same semester, as the course site also had other capstone experiences-COMP-XM and simulation requirements.

After several administrations, the accounting faculty were able to move the test site out of the capstone BBA course, and into the culminating course in the Accounting major, Auditing and Assurance Services.

Generally, students would be taking both the general BBA capstone and the Accounting major course in the same, final semester, but this enhancement made for better logistics. Initially the number of questions on the MSEE was a total of only 50 multiple choice questions, but in the past few administrations we have expanded to 75 to address all the outcomes. Item analysis of the individual question results is an ongoing process. Summary results of the MSEE to date appear in the following tables.

### ASSESSMENT RESULTS

The College of Business has seven desired learning outcomes in its BBA program:

- Communication skills
  - Written
  - Oral
- Ethical and social responsibility
- Thinking skills
- Interpersonal skills and appreciation for diversity (teamwork)
- Use of technology in business
- Dynamics of the global economy
- Knowledge of the business environment

Appendix A illustrates how these learning outcomes at the BBA level serve as the component framework of the College’s comprehensive assurance of learning plan for the BBA and illustrates how these integrate with various assessment methods.

A formal Assessment Committee meets and establishes guidance for a variety of assessments across the BBA program. Student awareness of the holistic plan is critical, and formal exit testing in the major is key to the assessment design. Appendix B provides the basics for the plan, and is actually a page drawn from the syllabus of the culminating course (auditing and assurance services) in the BBA-Accounting program. Appendix B also shows the individual learning outcomes, and weights as tested on the MSEE.

The accounting faculty were interested in targeting “Knowledge of Business” especially as it applied to the accounting discipline, but would not intentionally exclude questions that might surface pertaining to other outcomes. Faculty were interested not only in assurance of learning on part of the student, but also on improvements in teaching on the part of the faculty. Accordingly, analysis of the assessment results each term provided an excellent forced review of actions taken to date, analysis of current data, plans for future semesters, and overall closing the loop in the teaching and learning process. The faculty agreed that once weak questions were identified, they would be monitored over semester semesters, and if proven continuously weak, then eventually replaced with questions that were presented with greater clarity.

**Table 1: Spring and Fall 2008 Semesters—BBA Capstone Course Site**

Accounting Major Learning Outcome	Question Count	Student Count (n)	Weighted Count	Correct Responses	Percentage Correct
1a Financial	20	37	740	366	49%
1b Managerial	10	37	370	217	59%
1c Tax	10	37	370	164	44%
1d/e AIS/Auditing	10	37	370	161	44%
Composite	50	37	1,850	908	49%

Table 1 shows the results of our first reporting period on this type of assessment. While the College of Business had a well-lubricated program of individual course embedded assessments of every major course in the discipline at least once per year, we had no prior experience of having such a wide-scale broad major field test, and especially in individual majors. Individual faculty in the Accounting Discipline typically hold expectations that performance as measured by the percentage correct would likely be uniform over the four accounting major learning outcomes.

The data analysis in Table 1 also reveals that the courses in Accounting Information Systems/Auditing and Tax pulled the average down with Managerial served as the sole outcome above the average. The Institution had experimented with a combined course for Accounting Information Systems with Auditing & Assurance Services for several years. The data in Table 1 reflect the limitation of accounting major outcomes 1d and 1e to a total of 10 questions. We subsequently reverted to a more standard curriculum of having separate courses for AIS and Auditing, and this lent itself well to having 10 questions in each discipline area outcome.

The Accounting Faculty are not pleased with the results. All questions were reviewed for clarity and reasonableness and found to be appropriate. The faculty decided to review especially all questions where 50% or fewer students answered the questions correctly. 70% correct was believed to be a great target to achieve, but several forces worked against student performance. Length of time since student took specific courses where the outcome components are addressed, several students not having had all the appropriate accounting coursework when they sat for the assessment in the capstone management class, and the absence of a longer testing history, all contributed to faculty thinking to hold strong on the current instrument for another semester. The faculty considered a number of issues that may affect improvements, including curriculum reform, including residency requirements, course sequencing, and statute of limitations on course credit.

**Table 2: Spring 2009 Semester—BBA Capstone Course Site**

Accounting Major Learning Outcome	Question Count	Student Count (n)	Weighted Count	Correct Responses	Percentage Correct
1a Financial	20	24	480	211	44%
1b Managerial	10	24	240	135	56%
1c Tax	10	24	240	108	45%
1d/e AIS/Auditing	10	24	240	135	56%
Composite	50	24	1,200	589	49%

Table 2 describes the results from the second reporting period of the Accounting MSEE. The Accounting Faculty were looking forward to analyzing these results at both the separate learning outcome level as well as at the specific question level. While the Accounting Information Systems/Auditing components increased, and the Managerial remained relatively high, low performances continue in the Financial and Tax. We have noted that the higher performing areas tend to be those which the student is currently studying, or has studied more recently than the other areas. Knowledge retention assessments are run in separate accounting courses but this practice is not done in the BBA Strategy capstone course.

The overall composite score of 49% correct (identical to the prior year) was viewed as unacceptable for the long run by the Accounting faculty. All questions were reviewed for clarity and reasonableness and six of the 50 were identified as being possibly ambiguous (See Appendix C). Item analysis results verified that these questions were low in performance correct. The Accounting Faculty determined that curriculum reform was necessary and drafted proposals for Catalog changes affecting the Accounting Major, strengthening the program, with specific additional outcomes of business application software

knowledge and accounting profession and ethics. In addition, the outcomes of Accounting Information Systems and Auditing became separated to agree to specific course areas now required for students entering under more recent Catalogs. The Assessment Committee of the College of Business charged the Discipline Faculty with revising the instrument (the MSEE) to agree to these modifications.

**Table 3: Fall 2010 Semester—BBA Capstone Course Site—Updated 75 Questions**

Accounting Major Learning Outcome	Question Count	Student Count (n)	Weighted Count	Correct Responses	Percentage Correct
1a Financial	20	18	360	210	58%
1b Managerial	10	18	180	102	57%
1c Tax	10	18	180	59	33%
1d AIS	10	18	180	101	56%
1e Auditing	10	18	180	88	49%
2 Software Apps	7	18	126	71	56%
3 Prof / Ethics	8	18	144	68	47%
Composite	75	18	1,350	699	52%

In Spring Semester, 2010 a change was made to include new questions, and these changes were continued into Fall Semester, 2010. Table 3 includes data for our fourth reporting period (fifth semester) on the Accounting MSEE, and the second semester expanding to 75 (rather than 50) questions, discarding unreliable questions, and attempting to build an assessment that measures student performance in achieving learning outcomes. The Accounting faculty responded to the Assessment Committee's concerns for assuring clarity in the questions by reviewing all questions and effecting replacement on four of the 75 questions. Table 4 illustrates the improved success made with the question replacements.

The overall composite score increased from 49% to 52%. The faculty continue to be concerned with a performance weakness in the tax learning outcome—still at 33%. On the other hand, the faculty are pleased with student performance increasing on the software applications learning outcome from 42% to 56%. The faculty are also satisfied that question improvements on the four questions make for a stronger assessment:

**Table 4: Student Results following Question Enhancements**

Learning Outcome	Question Reference Number	Percentage Correct Fall 2009	Percentage Correct Fall 2010
1a Financial	001	6%	33%
1a Financial	019	33%	83%
1b Managerial	029	50%	89%
1c Tax	031	11%	39%

Faculty Discipline meetings invested time to discuss the current data results. Faculty syllabi, teaching delivery, and other factors were evaluated. Sequencing Accounting Information Systems (ACCT 4330), Taxation of Individuals (ACCT 3250), along with Intermediate Financial Accounting II (ACCT 3352), as required pre-requisites to the Auditing and Assurance Services Course (ACCT 4480), and with improvements sought at the University level for residency and historical time limitations on ACCT course

work were thought to strengthen the overall product. The Accounting Faculty looked forward to having the Major Specific Exit exam housed in ACCT 4480, the culminating course in the Major.

**Table 5: Fall 2011 Semester—Auditing Course Site—75 Questions—15% Grade Component**

Accounting Major Learning Outcome	Question Count	Student Count (n)	Weighted Count	Correct Responses	Percentage Correct
1a Financial	20	14	280	174	62%
1b Managerial	10	14	140	75	54%
1c Tax	10	14	140	59	42%
1d AIS	10	14	140	77	55%
1e Auditing	10	14	140	100	71%
2 Software Apps	7	14	98	45	46%
3 Prof / Ethics	8	14	112	61	54%
Composite	75	14	1,050	591	56%

Table 5 provides the results for the fifth reporting period (sixth semester) on the Accounting MSEE, and the third semester expanding to 75 (rather than 50) questions, discarding unreliable questions, and attempting to build an assessment that measures student performance in achieving learning outcomes. It should especially be noted that the risk factor student perception likely changed with this administration as well, with a heavier weighting of the exam as component into the student’s final course grade in the Auditing & Assurance Services course. The Accounting faculty responded to the Assessment Committee’s concerns for assuring clarity in the questions by reviewing all questions and effecting replacement on four of the 75 questions.

Until the Fall 2011 Semester, the assessment was administered in the BBA capstone Strategic Management course, with course weight on that course final grade of 7.5%. With the relocation of the assessment to the Auditing & Assurance Services course, the Accounting Major Culminating course, weight was increased to 15% of final grade (as was agreed to do by all Discipline Majors within the College of Business for the Fall 2011 administration). The faculty are pleased with the increasing progression of successful responses by the accounting majors, as shown comparatively in the following Table 6 with immediate two prior administrations of the MSEE.

**Table 6: Student Results following Enhancements on Questions and Grade Weighting**

Semester (and n)	Possible Points	Mean Actual Points	Percentage Correct	Mean Exam Time
Fall 2009 (18)	75	35.6	47.5%	1:27:18
Fall 2010 (18)	75	38.7	51.6%	1:42:59
Fall 2011 (14)	150	84.4	56.3%	1:51:35

Faculty believe the increased mean examination time is a favorable indicator, as students perceive there is more at risk relative to final grade, and that their results affect the final grade in the culminating course of their major, and the GPA of their major.

Based upon the three year trend in Table 6, the overall composite score increased from 48% to 52%, and then to 56%. The faculty continue to be concerned with a performance weakness described in Table 6 in

the tax learning outcome—improving from 33% to 42%, but still less than any satisfactory benchmark of 50%. Also, the software applications outcome which did improve from 2009 (42%) to 2010 (56%), dipped down to 46%, possibly attributable to the fact that not all students took their entire curriculum at our Institution. The greatly improved results on the auditing outcome, from 49% to 71% is not unexpected, as all students were captive to that course this semester, and for the first time, all students had all pre-requisites for the MSEE in the culminating course. With the previous housing in the BBA capstone Strategic Management course, there were always students who did not have the ACCT 4480 because of timing issues where students took the Strategic Management course in a semester preceding the Auditing & Assurance Services course.

The faculty continue to be satisfied that question improvements implemented in 2010 on the four questions make for a stronger assessment. Table 7 shows the additional improved performance for 2011.

**Table 7: Student Results following Question Enhancements with 2011 Comparisons**

Learning Outcome	Question Reference Number	Percentage Correct Fall 2009	Percentage Correct Fall 2010	Percentage Correct Fall 2011
1a Financial	001	6%	33%	43%
1a Financial	019	33%	83%	86%
1b Managerial	029	50%	89%	86%
1c Tax	031	11%	39%	71%

Faculty syllabi, teaching delivery, and other factors were reviewed. A larger n was expected with the 2012 and 2013 sittings, following which more detailed question item analysis will be applied. Sequencing Accounting Information Systems, Taxation of Individuals, along with Intermediate Financial Accounting II, as required pre-requisites to the Auditing and Assurance Services course, along with improvements sought at the University level for residency and historical time limitations on ACCT course work will strengthen the overall product. As the tradition of quality assessment continues on the campus, our students take the concept of rigor and performance more seriously, are actually saving notes and text resources from prior courses, and are experiencing the joy of learning. The Accounting Faculty believe having the Major Specific Exit exam housed in the discipline's rightful place, the culminating course in the Major, and controlled by faculty in the discipline, is critical to evolving student success on the culminating assessment.

### **SUGGESTIONS FOR FUTURE RESEARCH**

Efforts of faculty in developing and modifying a comprehensive curriculum instrument over time can generate substantial gains for both teachers and learners. More work is needed relating students performances on major field assessment to major learning outcomes and overall assessment of learning plans at their institution. Faculty work and improvement on individual questions within the key courses in the major may contribute to improved testing on a major specific exit examination. Integration of simulation software such as COMP-XM in a well-designed curriculum may prove to be an effective catalyst. Also, correlation with component success on the Major Field Test in Business sponsored by the Educational Testing Service may suggest whether individual institutions are aligned with the broader national market. Benchmarking against peer schools is another possibility.

It is also recognized that a significant number of Accounting Major graduates will strive for certification as part of their self-development and career success as a personal outcome. Therefore, another fruitful area for future research would be to relate the institution's major learning outcomes and major field

assessments to current requirements for professional accounting certifications. Cross study with patterns of graduates' success with CPA licensure in the institution's state and other states in which their students are likely to practice accounting, auditing and assurance services and taxation would render confidence and increased external validity. A valuable continuation of this line of research would then be to investigate the relationship of students' performance on the major field assessment exit examination to performance on the CPA exam.

## APPENDIX A

### BBA Level -- Comprehensive Assurance of Learning Plan

Component	Method
B.B.A. Program Learning Outcomes <input type="checkbox"/> Communication Skills <ul style="list-style-type: none"> <li>○ Written</li> <li>○ Oral</li> </ul> <input type="checkbox"/> Ethical and Social Responsibility <input type="checkbox"/> Thinking Skills <input type="checkbox"/> Interpersonal Skills and Appreciation for Diversity (Teamwork) <input type="checkbox"/> Use of Technology in Business <input type="checkbox"/> Dynamics of the Global Economy <input type="checkbox"/> Knowledge of the Business Environment (Course Specific Concepts)	Formative Course Embedded Assessment:  All learning outcomes of at least one section of every core and major required course assessed every two years through formative course-embedded assessment.  Every full-time professor required to conduct one formative course-embedded assessment per calendar year, with reports included in annual performance review portfolio as part of minimum expected performance.
Major Specific Knowledge <input type="checkbox"/> Accounting <input type="checkbox"/> Marketing <input type="checkbox"/> Management <input type="checkbox"/> Supply Chain	Summative Assessment:  Major specific exit exams (MSEE) administered in "capstone" major courses every semester:
Common Body of Business Knowledge <input type="checkbox"/> Business Core	Summative Assessment:  College of Business Fundamentals Exit Exam (internally developed) administered in capstone strategy course (MGMT 4750) fall semesters and alternate summers.  ETS Major Field Test in Business (nationally normed) administered in capstone strategy course (MGMT 4750) spring semesters and alternate summers.
Integration and Application of Business Knowledge <input type="checkbox"/> Demonstration of business acumen and decision making skills <input type="checkbox"/> Demonstration of ability to work with a variety of financial and operational data.	Summative Assessment:  Capsim's Comp-XM Exam administered in capstone strategy course (MGMT 4750) every semester. Students required to run a company in simulation, make decisions across all functional areas to generate balanced scorecard results, and answer quiz questions using financial and operational reports. Exam is nationally normed.
Stakeholder Satisfaction (Indirect) <input type="checkbox"/> EBI Student Satisfaction Survey	<input type="checkbox"/> Annually; compared to peer schools

## APPENDIX B

### Accounting Major Level – Final Exit Assessment (drawn from final course--auditing syllabus, and cover page to the actual instrument)

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**THE ACCOUNTING MAJOR:**  
*Major Specific Exit Examination (MSEE)*  
*Major Learning Outcomes [LOs] Embedded Assessment*  
*The Accounting, Business Law, and Taxation Discipline:*  
*College of Business at the X, Y, & Z University*

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**This assessment includes seventy-five (75) questions and ties to the Accounting Discipline's Mission and Major Learning Outcomes:**

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Consistent with the mission of the College of Business, the mission of the Accounting Discipline is to prepare accounting majors for professional careers in accounting. In addition to the BBA learning outcomes, upon completion of the program, accounting majors should be able to demonstrate. . .

LO1. Technical competence in the Discipline's functional areas of

- a) Financial accounting and reporting (20: #1-20)\*
- b) Managerial cost accounting (10: #21-30)\*
- c) Income taxation (10: #31-40)\*
- d) Accounting information systems (10: #41-50)\*
- e) Auditing and assurance services (10: #51-60)\*

LO2. Skills in application of accounting software and other business software for processing accounting information (7: #61-67)\*

LO3. Knowledge of ethical concerns and recognition of other ongoing issues and practices in the accounting profession (8: #68-75)\*

***\*This assessment carries the number of questions associated with the major learning outcomes described parenthetically above.***



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