

# The Community College of Baltimore County Learning Outcomes Assessment Final Report ACCT 101 Principles of Accounting I

## 1. Designing and proposing a Learning Outcomes Assessment Project:

**Course description:** Provides in-depth study of the accounting cycle for sole proprietorships, including record-keeping, preparation of financial statements, and the theory of accounts; uses computer technology and problem-solving techniques to supplement classroom work. The LOA project provided an opportunity for the ACCT faculty to collectively determine specific course core competencies and measure actual student performance. The ACCT 101 course was noted as a high impact course with a high drop/failure rate. The LOA project provides an on-going opportunity to determine specific weaknesses, implement interventions and update the assessment instrument.

### The following objectives were assessed:

1. Explain basic generally accepted accounting principles; e.g., historical cost, objectivity, going-concern assumption, entity assumption and the matching process;
2. Analyze business transactions and apply the mechanics of double entry bookkeeping;
3. Analyze and journalize adjusting entries;
4. Prepare a set of simple financial statements: income statement, statement of owner's equity, and balance sheet;
5. Compute cost of goods sold and gross profit. Explain their relevance to the financial statements;
6. Explain the fundamentals of internal control;
7. Prepare a simple bank reconciliation;
8. Apply accounting procedures to estimate uncollectible accounts receivable;
9. Compute cost of goods sold and ending inventory by applying perpetual FIFO, LIFO, and weighted average methods;
10. Differentiate between the periodic and perpetual inventory systems;
11. Compute depreciation of plant and equipment by applying Straight-line, Double Declining Balance, and Units of Production methods;
12. Journalize the disposal of plant and equipment; and,
13. Journalize basic payroll accounting entries.

Each campus administered a common final exam (drawn from the textbook test bank and externally validated) as the quantitative method to collect data that measured the aforementioned objectives. The exam consisted of multiple choice questions and one problem and assessed recognition of concepts and application of skills.

A draft of the 50-multiple-choice-question final exam was externally validated by faculty teaching the same course at other local community colleges (Anne Arundel, Baltimore City, Prince Georges, and Carroll County). Most comments were favorable; however, the draft was revised to include suggested changes. Primary among them was the inclusion of a spreadsheet problem.

The Catonsville and Dundalk/Essex campuses had previously initiated their own campus learning outcomes assessment projects. Then, in Fall 2001 and Spring 2002 all campuses combined their efforts and administered one common final exam. Base-line data was collected in Fall 2001, analyzed and presented in a report dated February 2002. Revising of the final exam

continued throughout each semester with each campus sharing results and offering improvements in both curriculum and assessment.

The project continued with a significantly revised final exam for Fall 2003 that was externally validated. Collectively, the faculty selected multiple-choice questions and developed the spreadsheet problem. A matrix was prepared that aligned each multiple choice question with the learning objective, assuring that the appropriate level of learning was being measured.

## **2. Implementing the design and collecting data:**

Course grade distribution and demographic data for the first semester of the LOA project.

691 ACCT 101 course grades were awarded in Fall 2001. 61% received a grade of A, B, C, or D. 22% received an F grade, and 16% withdrew. This is contrasted with all CCBC courses in Fall 2001, wherein 76% earned an A, B, C, or D; 13% earned an F, and 8% withdrew.

215 ACCT 101 grades were earned by African-American/Black students in Fall 2001. Overall, their success rate was lower. 50% received a grade of A, B, C, or D. 31% received an F grade, and 18% withdrew.

### **Data Analysis:**

With average scores of 65% on the Dundalk/Essex campuses and 60% on the Catonsville campus, it can be stated that, generally, most students failed the final exam.

Using Banner data to determine the sections' enrollment at the beginning of the semester (3rd week data); we can determine that 42% and 30% of the enrollment was lost on the Catonsville and Dundalk/Essex campuses, respectively.

## **3. Redesigning the course to improve student learning:**

### **Comparison and alignment of CCO objectives and exam questions:**

- Reconstruction of the exam, carefully selecting questions that addressed the learning levels listed in the CCO Objectives.
- Conducted Faculty workshops that addressed the importance of this exam. The workshops stressed the importance of developing and implementing MANY assessment opportunities so that students receive feedback on their progress. Discussed the specific teaching/learning activities/strategies that are currently being employed by faculty that have been shown to enhance student learning and require all faculty members to implement those activities.
- Without “teaching to the final,” developed methods that stressed to students the importance of acquiring those skills that will be assessed during the final.
- Implemented developmental education prerequisites for Reading, Math, and English/ESOL. Students wishing to take ACCT 101 without the prerequisites would need the permission of the program coordinator. If permission is not granted, students should be advised to take ACCT 100 while working on the prerequisites.
- Increased availability of trained tutors; including Supplemental Instructors.

- Increased infusion of technology, including creation of Web CT support sites for students.
- Offered Late Start ACCT 100 sections (more of them); and advised students not doing well in 101 to take 100 first.
- Offered Late Start ACCT 101 sections (more of them); and advised students not doing well in 101 to repeat chapters 1-5 to gain mastery before going on.

**State which recommendations were implemented as interventions and why they were chosen.**

- Supplemental instruction increased
- Additional tutors, dedicated to Accounting, were hired
- Tutors receive on-going training from the program coordinator
- Textbook features and web site are reviewed
- Homework Manager navigation
- Sharing of tutors' best practices; coordinator's observations and feedback
- One tutor developed a WebCT site for students who visit the Essex Success Center
- Faculty meetings were conducted
- Shared best practices
- Identified specific common assignments
- Received technology training – website and Homework Manager
- As a result, a few more faculty (mostly adjuncts) have increased their use of technology as well as increased the number of feedback assessments throughout the course
- Faculty discussed the project while attending national conventions; infusion of technology found to be significantly helpful.
- WebCT supplement was developed by one faculty member
- Coordinator met with counselors; shared LOA results; stressed need for clear academic advising and strong suggestion of ACCT 100 and pre-requisites, even though not formally required.
- Late start ACCT 100 and 101 sections continue to run. Students were allowed to drop ACCT 101 and take ACCT 100 if failing at the mid-term date.

**4. Implementing course revisions and reassessing student learning:**

Course grade distribution and demographic data for the second semester of the LOA project.

707 ACCT 101 course grades were awarded in Fall 2004. 58% received a grade of A, B, C, or D. 21% received an F grade, 3% received an Incomplete and 19% withdrew. This is contrasted with all CCBC courses in Fall 2004, wherein 76% earned an A, B, C, or D; 13% earned an F, 2% received an Incomplete and 9% withdrew.

211 ACCT 101 grades were earned by African-American/Black students in Fall 2004. Overall, their success rate was lower. 41% received a grade of A, B, C, or D. 31% received an F grade, 4% received an Incomplete and 25% withdrew.

**Data Analysis:**

By Campus: There was a normal distribution of scores on the exam. Overall, the mean score was 34.8. Of the 398 students tested, 27 students scored above 45 (90%), with 1 student correctly answering all questions on the exam. The scores on each campus were significantly different; Catonsville mean 32.7, Dundalk mean 36.4 and Essex mean 36.4. The sample

contained one web course (n=7) in which the mean test score (37.6) was 8% higher than the overall test score mean. Mean scores were also examined by full-time and part-time faculty status and campus. Total scores of students enrolled in Catonsville “owned” sections taught by full-time faculty were significantly lower (mean 29.3) than those taught by part-time faculty (35.0). There were no differences by faculty type at Dundalk or Essex.

By Demographic Characteristics: The mean test scores for African Americans (31.9) and Whites (36.2) was significantly different (.000). On average, White students scored 12% higher than African American students. No significant differences were found by gender or within ethnic groups by gender. Within gender, mean test scores were significantly different across the three campuses. Mean test scores for African American females and males were on average 4 points lower than test scores for White females and males.

By Developmental Needs: The LOA sample contained 59 students that were concurrently taking a developmental course, 8 of which were enrolled in two courses. Mean test scores for students taking at least one developmental course were 32.1 and 35.0 for those not taking any developmental courses. The difference in mean test scores was significant overall and at the Catonsville and Essex campuses (p<.05).

By Time of Day: The LOA sample contained 15 morning sections (221 students), 6 afternoon sections (63 students) and 11 evening sections (107 students). One section was web based. The mean test score for the morning sections was 34.1, afternoon – 35.8, and evening – 35.4. Analysis of variance indicates no significant difference in scores between times of day.

## **5. Final analysis and results:**

Of the 707 students enrolled at the end of the term, 410 (58%) received a grade of A, B, C or D. This success rate is lower than the first term that the LOA was administered (Fall 2001). Success rates were similar for these 2 terms at Catonsville. However, success rates at Dundalk increased from 60% (Fall 2001) to 72% (Fall 2004). Success rate at the Essex campus dropped from 68% to 61% for this time period.

The success rates have not increased for African-American students.

### **Impact of implemented interventions.**

The ACCT faculty have done all that they could reasonably do to improve student performance. The continued high withdraw/failure rates needed to be addressed from a more global, policy-driven perspective. Despite the implemented interventions, results did not improve.

Developmental students who remained in the course and took the final exam, scored below the mean. What has not been tracked is among those who dropped the course, how many were developmental or had not yet been assessed for pre-requisites?

The Dundalk campus success rate improved. This consisted of 2 sections – one day taught by a full-timer, and one evening taught by an adjunct. The class sizes were small and use of technology was consistent throughout the semester in both sections. The students were either taught in a smart classroom, in a computer lab, or in a classroom with a smartcart. Both instructors used Homework Manager. Homework assignments were given regularly and graded promptly for feedback.

### **Recommendations for future steps to be taken based on the LOA findings.**

The following suggestions were thought to have the greatest immediate impact:

Reading, English and Math pre-requisites need to be required. This policy is further supported by ACBSP accreditation standards.

Greater infusion of technology is required. The LOA results show that those sections taught in a lab environment with use of McGrawHill's Homework Manger and other technology had lower withdraw/failure rates. Given the additional workload and the limitations of computer labs, section enrollment should be limited to 28 students.

**Recommendation:**

Re-evaluate the departmental exam during Fall 2007 and re-administer with data collection in Spring 2008, provided resources are available to collect and summarize data.