

MyLab Accounting educator study evaluates use of the Accounting Cycle Tutorial at College of Central Florida

<p>School Name College of Central Florida, Ocala, FL</p> <p>Course name Financial Accounting</p> <p>Course format Face-to-face</p> <p>Course materials MyLab Accounting with <i>Horngren's Financial and Managerial Accounting: The Financial Chapters</i> by Nobles, Mattison, and Matsumura</p>	<p>Timeframe Spring 2017</p> <p>Submitted by Connie Hardgrove, Assistant Professor</p> <p>Results reported by Candace Cooney, Customer Outcomes Analytics Manager</p>
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Key Findings

- Data indicate very strong correlations between average MyLab homework scores, average MyLab quiz scores, and average MyLab exam scores.
- Students who scored above average on the Accounting Cycle Tutorial assignment earned average exam scores eight percentage points higher than students who scored below average.
- 84 percent of student survey respondents agreed that the 10-step Accounting Cycle Tutorial assignment in MyLab helped them to more completely understand and master the fundamentals of the accounting cycle process.

Setting

- Locale: large, public, four-year college located in the small town of Ocala, in north-central Florida. Ocala is the largest of College of Central Florida (CCF)'s four campuses.

- Enrollment: more than 11,000 students
- Retention rate: 65 percent
- Graduation rate: 42 percent
- Student-faculty ratio: 25:1
- Age: 41 percent of students are 25 years or older
- Gender: 63 percent female
- Diversity: 45 percent ethnic minority

About the Course

Connie Hardgrove has been teaching introductory accounting courses since 2006 and began teaching at College of Central Florida in 2009. Financial Accounting is a three-credit, one-semester course that is the first semester of a two-semester sequence, enrolling approximately 300 students per year. The course is required of business students who comprise approximately 50 percent of the enrollment and is also required of criminal justice and health care majors. Financial Accounting introduces students to the principles of financial accounting including the following topics: analyzing transactions, adjusting entries, completion of the accounting cycle, assets, liabilities, payroll, statements of cash flow, and financial statement analysis.

Challenges and Goals

Recognizing that practice and homework are important for student success in accounting, Hardgrove met with her Pearson representative approximately four years ago to learn more about the MyLab Accounting™ digital program. She hoped that MyLab would be able to remove the task of hand-grading assignments, which had become unmanageable as the number of students she taught each semester increased. She expected that an additional benefit of online, graded homework might be the just-in-time tutoring support for students as they worked through problems. Hardgrove's lecture is interactive, and often students work in small teams on examples and assignments. She recognized that a variety of MyLab resources could be used for group work in class as well. Hardgrove adopted MyLab for Fall 2013 classes.

In 2015, Hardgrove added to her course implementation by recommending that her students complete the [Accounting Cycle Tutorial](#) (ACT) assignment, an interactive tutorial she hoped would help students fully understand fundamentals of the accounting cycle. Because it was not required, most students did not complete the assignment. However, students who did work in the tutorial shared with Hardgrove that it was instrumental in their understanding of accounting fundamentals. For Fall 2016, Hardgrove required the ACT as part of her MyLab course assignments.

Implementation

First Day Access and Experience

[Pearson's Learning Management System \(LMS\) integration service](#) offers students and instructors easy access to MyLab from their existing school LMS. Hardgrove chose to integrate her MyLab course with Canvas for the following reasons:

- Single sign-in process: students are ready to work in MyLab on the first day of class;
- Grade transfer: grades are easily transferable from MyLab to Canvas and there is one single gradebook for the course; and
- Content linking: ability to link to MyLab directly from Canvas.

Hardgrove's students have just one access code and a single sign-on process instead of the need to log in to Canvas and additionally sign in to MyLab. This results in a simple way for students to start their MyLab assignments, ensuring that they are ready to work from the first day of class. On a voluntary, end-of-semester survey of Hardgrove's classes (81 percent response rate), students indicated the following:

- 96 percent of respondents strongly agreed or agreed that they were able to access MyLab through Canvas and appreciated not having a second, separate login for MyLab.
- 98 percent of respondents strongly agreed or agreed that the log-in and registration process for MyLab through Canvas was quick and simple.

Most students are familiar with MyLab from other courses but for those who are not, Hardgrove invites a Pearson representative to set up training for students who desire help navigating the homework assignments, eText, videos, and other resources. Hardgrove fills in the gaps and demos how to link to Canvas during her first lecture. Providing students with [First Day of Class resources](#) is a Pearson MyLab best practice providing students with a positive start to their digital homework experience and may lead to fewer questions and confusion during the critical start-up period.

MyLab Assignments

MyLab Accounting is required; the program is used primarily by students working at home on a personal computer. Students use MyLab for understanding content, homework assignments, and additional practice. Hardgrove's expectation is that students will spend approximately 4.5–6 hours per week working in MyLab including reading assignments. On the end-of-semester survey, students concurred, with 33 percent of respondents indicating they spent 3–4 hours in MyLab, 22 percent spent 4–5 hours in MyLab, and an additional 21 percent spent more than five hours working in the program.

Hardgrove's goal in assigning MyLab homework is to provide students with sufficient exposure to quantitative material necessary to prepare for exams and to provide adequate practice opportunities.

- MyLab homework problems: Students complete five multi-part problems per assignment. Exercises are chosen based on learning objectives covered in the chapter and are algorithmic problems so students can practice as much as needed. Students have three attempts at completion and the final attempt is recorded as the student score. Learning aids,

which provide hints and assistance on a just-in-time basis as students work through a problem, are turned on for homework assignments. On the end-of-semester survey, 88 percent of respondents strongly agreed or agreed that they used available learning aids when unable to start or complete a homework problem. One student on the survey shared, *“Resources like “Help Me Solve This” and “Show an Example” were very beneficial when I misunderstood a question.”*

- MyLab quizzes: Quizzes are comprised of approximately 10 multiple-choice, concept-based questions which are similar to those found on exams. Students have one attempt for completion and are limited to 60 minutes for completion.

[Accounting Cycle Tutorial](#) (ACT): This interactive 10-step tutorial assignment provides Hardgrove’s students with the opportunity to practice each step of the important accounting cycle using videos, animations, and immediate assessment. In order to move from practice to mastery, students must achieve a practice score of at least 75 percent, and to move from step to step within the 10-step assignment, students must earn a mastery score of 60 percent. Students have unlimited attempts to complete the assignment. The assignment is open on the first day of class and is due prior to the final exam. However, Hardgrove urges students to complete the tutorial simultaneously with chapters 1–4 where most of the accounting cycle topics are covered. On the end-of-semester survey, students shared the following about the ACT:

- 84 percent of respondents strongly agreed or agreed that the 10-step Accounting Cycle Tutorial assignment helped them more completely understand and master the fundamentals of the accounting cycle process.
- Students identified the ACT assignment to be:
 - 15 percent: Relatively simple
 - 58 percent: Manageable
 - 17 percent: Manageable but difficult
 - 10 percent: Very challenging
- Time spent completing the ACT assignment:
 - 21 percent of students: Less than three hours
 - 27 percent of students: 3–4 hours
 - 17 percent of students: 4–5 hours
 - 6 percent of students: 5–6 hours
 - 29 percent of students: More than six hours

Student survey comments included:

- *“I learned more from the exercises in the Accounting Cycle Tutorial than I did from the normal homework.”*
- *“I think by learning one step at a time, it helped me be less overwhelmed with all the different steps in the cycle.”*

- *“Using the ACT was helpful because it was an aggregation of all the assignments that I already completed in the class so I was able to feel as though I was learning to file information for a corporation as opposed to feeling as though I could only do one piece at a time.”*

Additional Assessments

Students complete two MyLab exams during regular class periods in a computer lab. Each exam is comprised of 30 multiple-choice questions from the Pearson test bank. Hardgrove includes some questions from MyLab homework that were challenging for students, but which had been reviewed in lecture. Students may use handwritten notes during the exam, and they have 1.25 hours for completion.

Students also complete a combination research paper and PowerPoint presentation, as well as a financial statement analysis project which requires them to perform horizontal, vertical, and ratio analysis in Excel.

Assessments

- 20% MyLab homework assignments (9)
- 20% MyLab quizzes (9)
- 16% Exams (2)
- 16% Attendance and participation
- 11% Research paper
- 8% Accounting cycle tutorial (MyLab)
- 8% Financial statement analysis project

Results and Data

Figures 1 and 2 are correlation graphs; correlations do not imply causation but instead measure the strength of a relationship between two variables, where r is the correlation coefficient. The closer the r value is to 1.0, the stronger the correlation. The corresponding p -value measures the statistical significance/strength of this evidence (the correlation), where a p -value $<.05$ shows the existence of a positive correlation between these two variables.

- A very strong positive correlation exists between average MyLab homework scores and average MyLab quiz scores where $r=.90$ and $p<.05$.
- A very strong positive correlation exists between average MyLab quiz scores and average MyLab exam scores where $r=.90$ and $p<.05$.

For students, the formative MyLab homework is intended to help them identify where they are in terms of successfully completing the summative quizzes and exams; it appears that performance on these assignments could be a leading indicator of course success (additional research is needed to develop and test this concept further). Hardgrove agrees that the MyLab assignments do indeed have a positive effect on student exam scores, and stated, *“We put a lot of thought into the MyLab assignments we create, to ensure that homework has an impact on the course assessments.”*

Correlation between MyLab homework score and MyLab quiz score

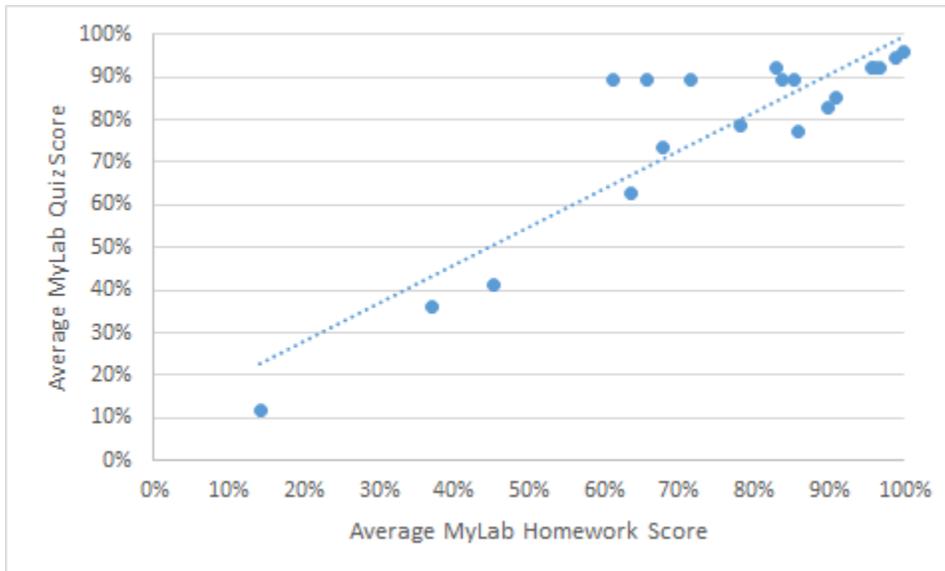


Figure 1. Correlation between Average MyLab Homework Score and Average MyLab Quiz Score, Spring 2017 ($n=81$)

Correlation between MyLab quiz score and MyLab exam score

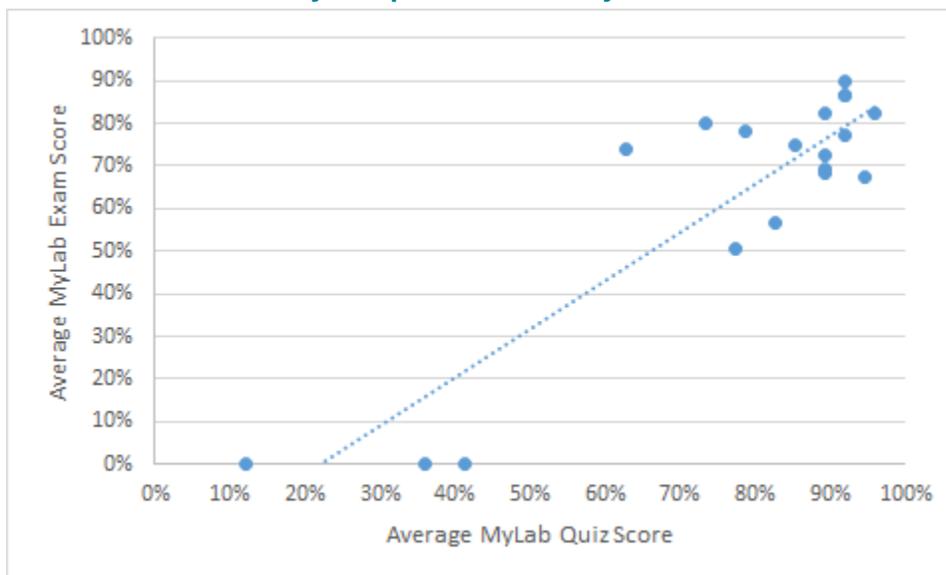


Figure 2. Correlation between Average MyLab Quiz Score and Average MyLab Exam Score, Spring 2017 (n=81)

Students were divided into two groups based on their average Accounting Cycle Tutorial score. Students who earned ACT scores above average earned higher average exam scores than students who earned ACT scores below average (figure 3).

- Students who scored above average on the ACT assignment earned average exam scores eight percentage points higher than students who scored below average.

Average ACT score and average MyLab exam score

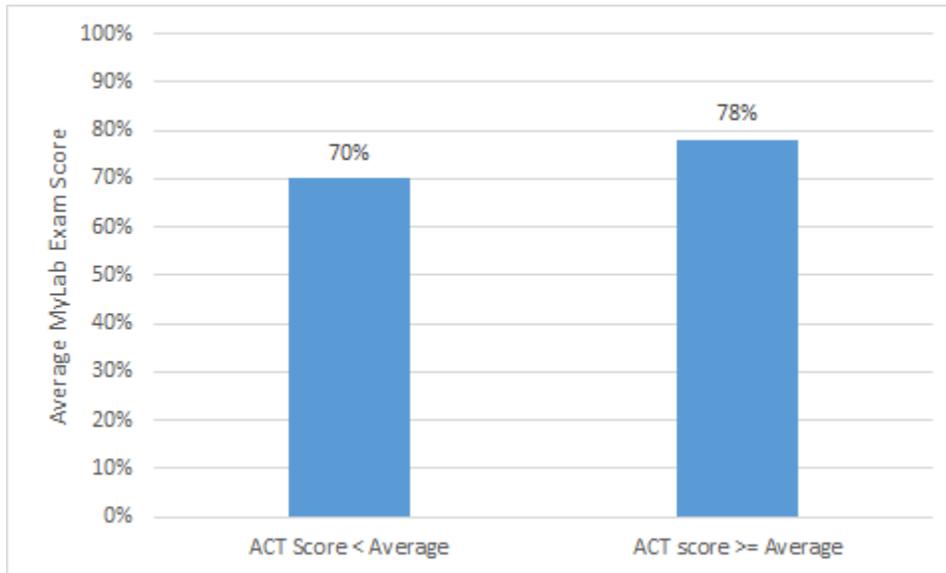


Figure 3. Average Exam Scores for Students Earning ACT Score Above and Below Average, Spring 2017 (n=81)

The Student Experience

Responses from the Spring 2017 end-of-semester survey of Hardgrove's students indicate that the majority of responding students recognize the value of MyLab Accounting.

- 84 percent of respondents strongly agreed or agreed that their understanding of the course material increased as a result of using MyLab.
- 88 percent of respondents strongly agreed or agreed that use of MyLab positively impacted their exam scores.
- 85 percent of respondents strongly agreed or agreed that MyLab provided additional resources that helped them learn more than they would have from traditional paper-and-pencil homework.
- 90 percent of respondents strongly agreed or agreed that they would recommend MyLab to another student.

Students responses to the question "What are the benefits of MyLab for you as a student?" include:

- *"The benefits include assistance to questions and a different perspective on how to answer problems than what is taught in class."*
- *"MyLab provides videos of information contained in the text for those who prefer or learn better with audio/visuals. The Study Plan is a helpful tool to practice prior to completing the chapter assignments and tests."*

- *“[The benefits are] the ability to understand the information outside of the textbook and see how the lessons apply to real business owners.”*
- *“MyLab makes learning easier with great tools to help you. Whether I didn’t know how to answer a question or I just wanted to refresh my memory, there were tools to help me.”*
- *“MyLab was an interactive that made me feel engaged in accounting, and it teaches in a way that reinforces what I learn from reading the textbook.”*

Conclusion

Teaching multiple sections each semester created a barrier to meaningful homework assignment and completion for Hardgrove. Knowing that students need practice to be successful in their course, she sought a digital solution to her homework dilemma. MyLab offered her the opportunity to assign problems that would give students practice, while also providing just-in-time tutoring in the learning aids like “Help Me Solve This” that are part of the program. Additionally, adding the Accounting Cycle Tutorial assignment to her MyLab implementation presented students with a tool to help them fully understand core accounting cycle principles. This was a common thread among student comments on the survey, as indicated by this response: *“I gained a strong understanding of the basics of accounting and its principles because of the tutorial.”*

Hardgrove urges new instructors to work through the MyLab assignments themselves so they can understand exactly what students are being asked to do. This allows an instructor to provide tips or help students avoid potential stumbling blocks before they begin assignments. Knowing what to expect can eliminate potential issues as assignments become more time intensive and challenging.