

MyLab Finance educator study analyzes quiz and exam scores at University of Southern Mississippi

Key Findings

- Students earning above average MyLab homework scores had higher average quiz scores (13 percentage points higher) and exam scores (nine percentage points higher) than students who scored below average on MyLab homework.
- Data show a very strong correlation between MyLab homework scores and average quiz scores.
- 84% of student survey respondents agreed that they completed more homework for this course than they would have if MyLab had not been required.

Study Specifics

School name: University of Southern Mississippi, Hattiesburg, MS

Course name: Principles of Finance

Course format: Online

Course materials: MyLab Finance with *Fundamentals of Corporate Finance* by Berk, DeMarzo, and Harford

Timeframe: Fall 2017

Educator: Mike Morgan, Professor of Practice

Results reported by: Candace Cooney, Pearson Customer Outcomes Analytics Manager

Setting

- Locale: large, suburban, public, four-year university with two campuses; main campus located in southeastern Mississippi.
- Enrollment: more than 14,000 students
- First-time freshmen: 13%
- Full-time graduation rate: 45%
- Ethnicity: 63% Caucasian, 26% African-American, 3% Hispanic, 2% Asian, 6% Other

About the Course

Mike Morgan has been teaching for the past four years as a full-time instructor at University of Southern Mississippi after transitioning from private industry. Principles of Finance is a one-semester, three-credit course required of all business majors, enrolling approximately 450 students each year in multiple sections led by multiple department faculty. Principles of Finance is the study of principles of financial analysis that incorporates reading financial statements, understanding the concepts and computation of time value of money, applying time value of money concepts to stock and bond valuation, and conceptualizing the trade-off between risk and return.

Challenges and Goals

Morgan began using MyLab™ Finance in Fall 2014 as an opportunity for his students to practice and reinforce what they need to know. MyLab enabled Morgan and his colleagues to standardize the course so that both face-to-face students and online students would have the same course experience. Standardizing homework and tests for both course formats allows for comparison across sections and instructors, enabling course changes to be made quickly and efficiently as needed. Additionally, the ready-to-go format of MyLab takes the pressure off instructors to create the problems sets, assessments, and real-world applications that are important for course success.

Implementation

Morgan'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. He believes that real learning occurs during this practice and anticipates that students will spend at least 2–3 hours per week using MyLab and its resources in order to be successful in his course. On an end-of-semester survey of Morgan's students (56% response rate), 32% of respondents said they spent 2–3 hours, 34% percent spent 3–4 hours, and 29% spent more than four hours per week working in MyLab.

Weekly MyLab homework is comprised of a pre-built assignment using end-of-chapter problems carefully chosen for time and difficulty. Each assignment consists of 15–25 problems and students have unlimited attempts at completion. Ninety-five percent of student survey respondents indicated that they always or usually reworked homework problems to increase their understanding of the content, and 97% agreed that this additional practice helped them master the chapter concepts. Additionally, 84% of respondents agreed that they completed more homework for this course than they would have if MyLab had not been required.

Learning aids are turned on for homework assignments, and 95% of survey respondents said they usually or always use the learning aids when unable to start or complete a problem. Many students commented on the learning opportunities provided by the homework aids:

- *"View An Example is a wonderful tool that really helped me understand how to work out each problem."*
- *"The variety of tools like Help Me Solve This helped me complete assignments and master concepts for tests."*
- *"I learn by seeing examples, so the View an Example option really helped me understand the different formulas to solve the homework problems."*

Completion of MyLab homework assignments is a prerequisite for opening the MyLab quiz. Quizzes are low stakes, filling the gap between formative homework and summative exams. Quizzes are comprised of five multi-part problems; students have three attempts and 40 minutes for completion. The highest score is recorded in the gradebook and the lowest two quiz scores are dropped for calculation of the final grade. Like homework, quizzes have a specific due date and quizzes not completed by that day and time earn a zero.

Students also have access to optional resources in MyLab. On the end-of-semester survey, 50% of students indicated that they used the MyLab Study Plan, 58% used the eText in MyLab, and 21% used the Dynamic Study Modules. Only 24% of students did not use any optional resources in the program.

Summative course assessments include three exams covering three or four chapters each. Exams are comprised of 25 multiple-choice questions, and students have three attempts and 100 minutes for completion. The highest score is recorded in the gradebook. Exams are proctored in the campus testing lab or under supervision of a pre-approved proctor for off-site students. Exams are made available to students on Monday of exam week and must be taken by Thursday.

Assessments

- 75% MyLab exams (3)
- 15% MyLab homework assignments (11)
- 10% MyLab quizzes (11)

Results and Data

Students were divided into two groups based on the average MyLab homework score of 84%. Data in figure 1 show:

- Students earning above average MyLab homework scores had average quiz scores 13 percentage points higher than students who scored below average on MyLab homework.
- Students earning above average MyLab homework scores had average exam scores 9 percentage points higher than students who scored below average on MyLab homework.

For students, the formative MyLab homework is intended to help them identify where they are in terms of successfully completing the summative course assessments. Empirically, Morgan indicates that he expects high homework scores to equate to positive quiz and exam scores. Students concur, with 89% of survey respondents agreeing that use of MyLab for homework assignments positively impacted their quiz and exam scores.

Average quiz scores and exam scores

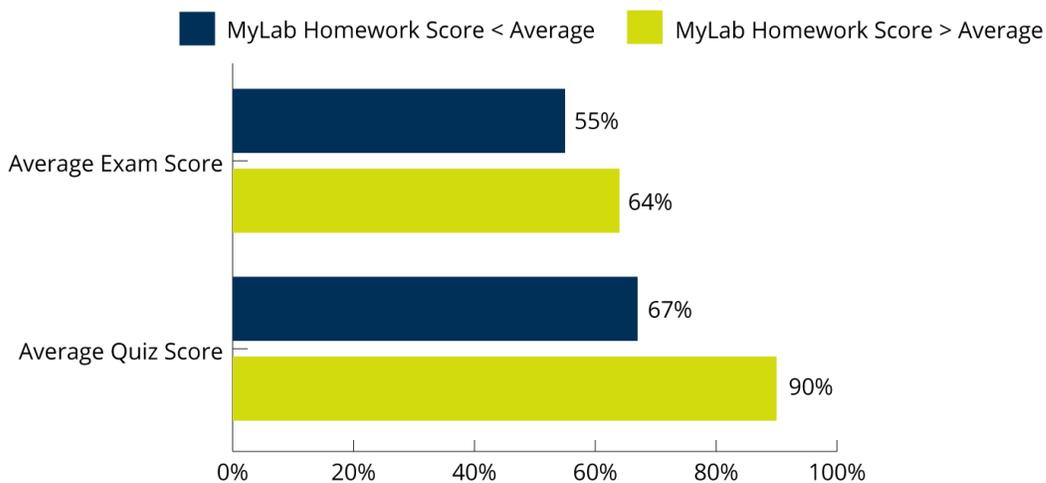


Figure 1. Average Quiz and Exam Scores Based on Average MyLab Homework Score, Fall 2017 (n=68)

Figure 2 is a correlation graph; 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 score and average MyLab quiz score where $r=.89$ and $p<.001$.

Correlation of MyLab homework scores and average quiz scores

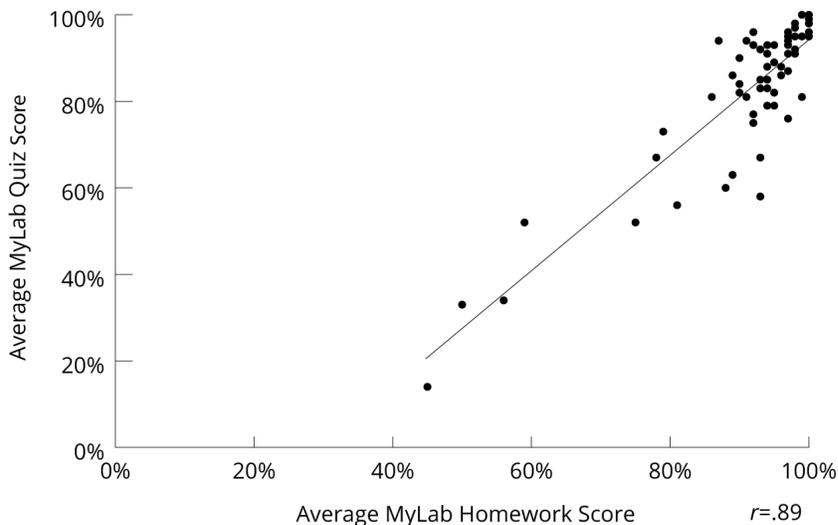


Figure 2. Correlation of MyLab Homework Score and Average MyLab Quiz Score, Fall 2017 ($n=68$)

The Student Experience

Responses from the Fall 2017 end-of-semester survey of Morgan's students indicate that the majority of responding students recognize the value of MyLab Finance.

- 92% 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.
- 84% of respondents strongly agreed or agreed that their understanding of the course material increased as a result of using MyLab.
- 89% of respondents strongly agreed or agreed that MyLab homework assignments positively impacted their quiz and exam scores.
- 89% of respondents strongly agreed or agreed that they would recommend MyLab to another student.

Student responses to the question, “What were the benefits of MyLab?” include:

- *“I got a better understanding of how to work problems vs the class that does not use MyLab.”*
- *“I like that I can do homework or study in the middle of the night or on a Sunday afternoon. MyLab lets me set my own pace and complete assignments on my own schedule. Also, View An Example was a huge help.”*
- *“[MyLab] was very useful in helping to prepare for exams. The ability of the program to be able to show step-by-step instructions to working the problems was very useful.”*
- *“It’s a convenient learning resource. I can work on school work from anywhere that I can access internet. The Learning Modules and problem examples have helped me understand the material better.”*

Conclusion

Online courses can pose a challenge, but the variety of MyLab assignments and study tools give students the background and practice necessary to be successful, regardless of the course format — online or face to face. Recognizing that students need practice, Morgan uses both homework assignments and quizzes in MyLab, setting his students up for a positive experience. Quizzes bridge the gap between problem solving and conceptual understanding, leading students to validate that their understanding of the course material increased as a result of using MyLab Finance. “MyLab was able to show me how to work out problems step-by-step and gain a better understanding of the topics,” confirmed a student on the end-of-semester survey.

Morgan shares that the flexibility of MyLab grading is also an important advantage for online classes. “You need to keep all students moving at the same pace, but because many online students also work, there are often circumstances that impact their schedule. Being able to change individual due dates to compensate for this when necessary is really helpful.” Communication tools in MyLab also help students in online classes stay connected with one another, helping to create a community within the course.

“MyLab was able to show me how to work out problems step-by-step and gain a better understanding of the topics.”

—Student, University of Southern Mississippi