

MyLab Finance educator study examines the impact of homework, including Excel projects, on test scores at the University of New Mexico

Key Findings

- Students who scored above average on MyLab assignments earned average test scores nine percentage points higher than students who scored below average on MyLab assignments.
- 68% of students completing all MyLab assignments earned an A or B as their final course grade while just 14% of students who skipped at least one assignment earned an A or B.
- On an end-of-semester student survey, 89% of respondents agreed that their understanding of the course material increased as a result of using MyLab Finance.

Study Specifics

School name: University of New Mexico, Albuquerque, NM

Course name: Financial Management

Course format: Online

Course materials: MyLab Finance for *Fundamentals of Corporate Finance* by Berk, Demarzo, and Harford

Timeframe: Fall 2018

Educator: Kathy Towle, Instructor

Results reported by: Candace Cooney, Pearson Results Manager

Setting

- Locale: large, urban, four-year, six-campus, research university in the heart of Albuquerque
- Enrollment: more than 24,000 students
- Freshman retention rate: 74%
- Six-year graduation rate: 54%
- Student ethnicity: 43% Hispanic, 35% White, 5% American Indian, 4% Asian, 2% African American, 11% Other

About the Course

Towle instructs approximately 115 students in Financial Management each semester, with more than 300 students taking the course each year. This course is designed to explain the substantive parts of financial management where students learn how to apply the theory of financial management in the business world, with more emphasis placed on the analytical and quantitative methods developed in recent years. The underlying theme is the valuation of financial assets and business projects, whether they be investment projects or business policies such as extending credit to customers.

Challenges and Goals

Financial Management is a course heavy on problem solving, so homework and practice are necessary for academic success. However, creating and grading weekly assignments for online courses is time consuming and unnecessary, given the options provided by many digital homework programs today. Seeking an online homework assignment and assessment system that would encourage students to participate in their own learning and facilitate greater understanding of the course content, MyLab™ Finance was adopted in Spring

2018. Towle also appreciated how MyLab provided instant feedback and automatic grading for her students — two keys to success that could not be accomplished with paper-and-pencil assignments.

Implementation

Conscious of the fact that course materials can be expensive, Towle gives her students options when purchasing MyLab and the textbook. On a Fall 2018 end-of-semester survey of her students, 95% of respondents indicated they purchased only the low-cost MyLab code with eText, forgoing a print text completely.

MyLab assignments

Towle views the MyLab assignments as formative — an opportunity for students to experiment and learn. Because the goal in assigning homework is practice, students are given three attempts at assignment completion. Learning aids, which provide students with just-in-time tutorials and support, are made available for homework assignments. On the end-of-semester survey, 69% of respondents said they usually or always used the learning aids when unable to start or complete a homework problem. Many students also commented on the advantages of the learning aids on the survey:

- *"I definitely like that there are options such as "View an Example" and "Help Me Solve This" when you don't understand something. For someone who struggles with certain problems, this is beneficial to understanding."*
- *"It's interactive. If you are unsure of how to answer a homework question, the provided learning aid will guide you step-by-step in how to solve the problem."*

Each MyLab homework assignment is comprised of approximately 15 multi-part, algorithmic, end-of-chapter problems due every Sunday at 11:59 p.m. Towle uses the [question metrics](#) regarding time and difficulty when choosing assignments and anticipates that students will spend approximately three hours each week working in MyLab. Students confirmed this on the survey, as 69% of respondents indicated they spent three or more hours working in the program. Additional survey results include:

- 86% of respondents agreed that MyLab provided additional resources that helped them learn more than they would have from traditional paper-and-pencil homework.
- 78% of respondents agreed that they completed more homework for this course through MyLab than they would have if homework had not been required.

MyLab Excel assignments

Towle also assigns five MyLab auto-graded [Excel projects](#) per semester. These problems are live in Excel, not a simulation, so students get to experience using Excel to solve real-world business challenges while receiving personalized feedback to check their understanding. "Once students graduate, they will use Excel in their work, so it is an important skill to learn," Towle explains. Students practice statistical skills and gain proficiency with Excel, but Towle is not tasked with manual grading of the assignments. On the student survey, students shared the following:

- 69% of respondents agreed that using Excel for homework exercises allowed them to practice problem solving in a real-world environment, similar to what might be expected of them in their future careers.
- *"Excel exercises were a great way to put what we learned into practice."*
- *"When I started this class, I was not as familiar with Excel as I am today."*
- *"The Excel exercises were difficult, but Help Me Solve This took me through the steps needed for completion."*

Other course assessments

Participation in discussion boards is required, and posting homework questions creates a supportive learning community where students are able to assist each other in understanding the course material. To further this goal, the discussion board has been designed to provide a virtual area where students can ask questions and get clarification on concepts they do not understand. Also, to develop an understanding of the business world today, students are required to share current events on the discussion board and respond to classmates throughout the semester. All discussion and current event postings are due each Wednesday at 11:59 p.m.

Three online tests and a comprehensive final exam are given through MyLab. Tests consist of 15–20 multi-part problems and students have 90–120 minutes for completion, depending on the test. Questions are pooled and randomized and chosen from the Pearson test bank. Students have two attempts at completion for the first test and just one attempt at the remaining tests, including the final exam.

Assessments

- 44% Tests (3)
- 23% Final exam
- 15% MyLab homework assignments
- 10% MyLab Excel projects
- 4.5% Discussion posts
- 2.5% Current event posts
- 1% Orientation activities

Results and Data

Students were divided into two groups based on their average MyLab homework score. Data in figure 1 show:

- Students who scored above average on MyLab homework had average test scores nine percentage points higher than students who scored below average.
- Students who scored above average on MyLab homework had average final exam scores six percentage points higher than students who scored below average.
- Students who scored above average on MyLab homework had average final course scores 12 percentage points higher than students who scored below average.

Average test, final exam, and final course scores based on MyLab homework score

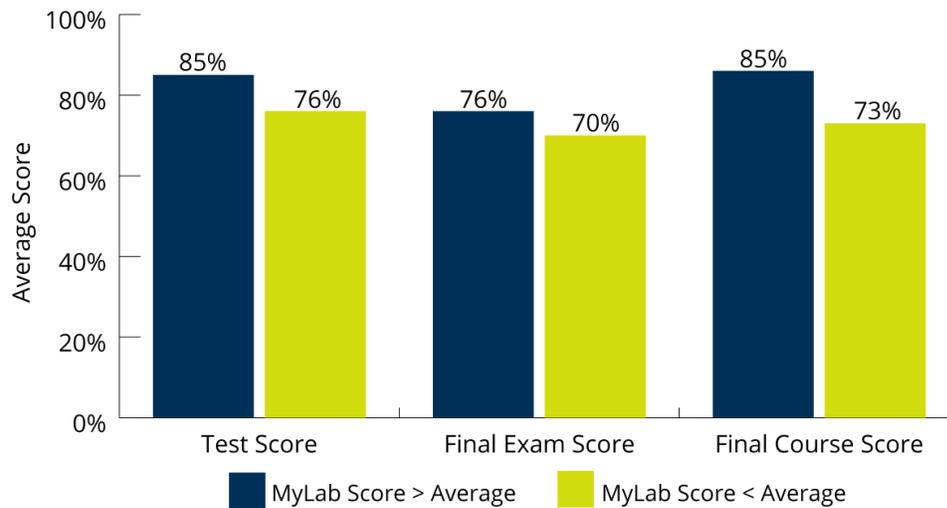


Figure 1. Average Test, Final Exam, and Final Course Scores Based on Average MyLab Homework Score, Fall 2018 (n=114)

Students were again divided into two groups based on MyLab homework completion, identifying the following (figure 2):

- 68% of students who completed all MyLab assignments earned an A or B as their final course grade while just 14% of students who skipped at least one assignment earned an A or B. No student who skipped a MyLab assignment earned an A for their final course grade.
- 43% of students scoring who skipped at least one MyLab assignment earned a D or F as their final course grade.

Data suggest that if students are not successfully completing MyLab assignments, they may not be aware of potential gaps in their content knowledge until they complete the course tests.

Final course grades based on MyLab homework completion

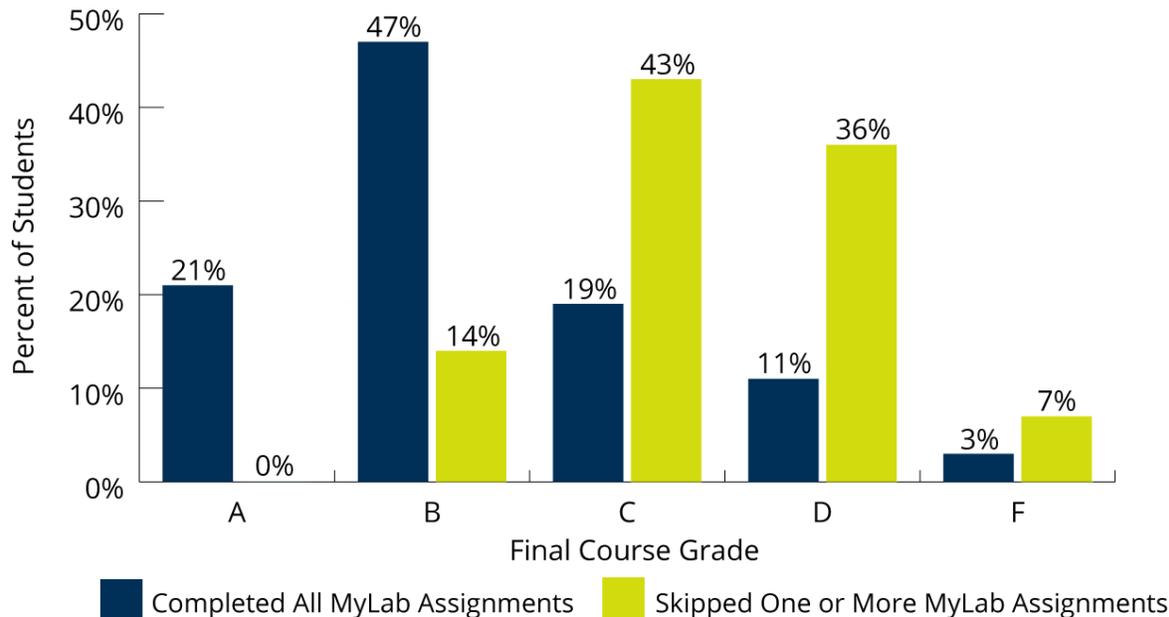


Figure 2. Relationship between Final Course Grades and MyLab Homework Completion, Fall 2018 (n=114)

The Student Experience

Responses from a voluntary end-of-semester survey of Towle's students indicate that the majority of responding students recognize the value of MyLab Finance.

- 89% of respondents agreed that their understanding of the course material increased as a result of using MyLab.
- 84% of respondents agreed that use of MyLab for homework assignments positively impacted their test scores.
- 86% of respondents agreed that MyLab provided additional resources that helped them learn more than they would have from traditional paper-and-pencil homework.
- 91% of respondents agreed they would recommend MyLab to another student taking this course.

Student comments when responding to the question, "What were the benefits of MyLab?" included:

- *"The benefits of MyLab include having the convenience of everything being digital and not having to carry a 'clunky' textbook."*
- *"It is an excellent helping tool. I am not good with math and I feel that it has helped me with equations and why types of information to look out for."*
- *"The multiple attempts on the homework is really helpful instead of submitting a homework set and not knowing if it's correct or not, and it offers help when you get stuck."*
- *"It made me stay on top of learning the new topics and practicing the problems."*
- *"The main benefit is if I am ever struggling with a problem I could always look at the additional help provided and it would clear any confusion or questions I had."*

Conclusion

In Towle's Financial Management course, homework is formative, and students have the opportunity to try, review, and try again, learning from their mistakes and practicing concepts until they are confident. The immediate feedback in MyLab offers her students something that paper-and-pencil homework cannot, helping them quickly identify areas of strength and weakness, leading to more focused practice opportunities. The MyLab learning aids also offer students instant support; as a student on the end-of-semester survey said, "*The biggest benefit to MyLab was Help Me Solve This.*" Survey respondents overwhelmingly agreed that MyLab offered them more than traditional homework, while the data indicate that MyLab homework performance may be an indicator of successful course completion.