

MyLab Finance educator study examines the impact of homework and Excel-based assignments at East Carolina University

Key Findings

- The majority of students scoring above average on MyLab homework (84%) earned an A, B, or C as their average exam grade, demonstrating mastery of course content.
- Data indicate that successful completion of MyLab homework assignments was indicative of higher final course scores.
- 92% of respondents agreed that completing Excel projects 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.

Study Specifics

School: East Carolina University, Greenville, NC
Course name: Financial Management II
Course format: Online
Course materials: MyLab Finance for *Corporate Finance* by Berk and DeMarzo

Timeframe: Spring 2018
Educator: James Nelson, Associate Professor
Results reported by: Candace Cooney, Pearson Results Manager

Setting

- Locale: large, urban, four-year, doctoral/research university in northeastern North Carolina
- Enrollment: approximately 29,000 students
- Freshman retention rate: 79%
- Six-year graduation rate: 54%
- Students of color: 26% undergraduate; 20% graduate

About the Course

James Nelson has been teaching for more than 20 years and has been at East Carolina University (ECU) since 2007. Financial Management II is a three-credit MBA/MSA course enrolling approximately 250–300 students per year. The course is primarily focused on problems faced by corporate financial managers and is designed to provide students with a deeper understanding of issues and areas of finance they have previously studied. Students are introduced to the tools needed for financial decision making and are exposed to the complexities involved in the decision-making process.

Challenges and Goals

About six years ago, Financial Management in the MBA program at ECU was offered only as a case-based course in a face-to-face format. As it became apparent that an online version of the course would be necessary due to growing enrollment, Nelson realized the course would also need to change from case-based to homework-oriented. Seeking a digital option that included pre-built assignments and assessment was important, as was auto-grading of homework, given the number of students in each section. The array of resources and study options in MyLab™ Finance offered Nelson a ready-to-use course that could be easily

adapted to his online course needs. MyLab Finance was adopted for implementation in 2012 and is now used in face-to-face sections as well.

Conscious of the fact that course materials can be expensive, Nelson gives his students options when purchasing MyLab and the textbook. On an end-of-semester survey (100% response rate) of his students, 60% of respondents purchased the MyLab code/eText only, the least expensive option. Generally, students are satisfied when purchasing course materials that have both relevance and impact, a statement supported by this same survey where 92% of respondents agreed that the use of MyLab positively impacted their quiz and exam scores.

Implementation

Students use MyLab for understanding content and homework assignments. Nelson shares that students' use of MyLab varies weekly, based on the difficulty of the chapter content as well as the students' background. On the survey, 50% of students indicated they spent approximately 2–5 hours per week on MyLab assignments, while 50% spent more than five hours working in the program.

MyLab assignments

Nelson 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 unlimited attempts at assignment completion. On the student survey:

- 94% of students agreed that being able to practice the homework problems as frequently as they wanted helped them master the chapter concepts
- 88% of students acknowledged they completed more homework using MyLab than they would have had homework not been required
- 71% of students said they always or usually re-attempted completion of homework assignments in order to better understand the material

Each MyLab homework assignment is comprised of approximately eight multi-part, algorithmic, end-of-chapter problems. Learning aids, which give students just-in-time tutorials and support, are turned on during homework assignments. On the end-of-semester survey, 69% of respondents said they always used learning aids when unable to start or complete a problem, and an additional 21% of respondents said they usually implemented the learning aids. Many students also commented on the advantages of the learning aids on the survey:

- *"Having the Help Me Solve This feature [was a benefit] instead of having to constantly ask the professor questions about a homework problem."*
- *"The benefit of MyLab was the Help Me Solve This function. I do believe that it gives you a very detailed walk through of how to solve the problems, so that you can see what you are doing wrong."*
- *"MyLab has great features such as View an Example and Help Me Solve This that gave me assistance when I was stuck on homework problems."*

Nelson creates recorded video lectures through Camtasia, but only the most important topics are covered. Students instead use the course discussion board as their primary vehicle for asking MyLab-related questions and understanding the chapter content. The board is very active, and generally, students are able to assist one another so Nelson receives fewer emails and questions as the semester progresses.

MyLab Excel projects

Nelson also assigns two MyLab auto-graded [Excel projects](#) per chapter. These problems are live in Excel, not a simulation, so students get experience using Excel to solve real-world business challenges while receiving personalized feedback to check their understanding. “Spreadsheet modeling is an important skill for MBA students — a necessary skill in the real world,” Nelson explains. Students practice statistical skills and gain proficiency with Excel, but Nelson is not tasked with manual hand-grading of the assignments. On the student survey, students revealed the following:

- 92% 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.
- *“I thought the Excel questions made the work more relevant. We probably are not sitting at a desk handwriting equations.”*
- *“I actually really liked the Excel exercises — I learned how to use some new formulas which I think might be helpful in the future.”*
- *“I learned tools in Excel that I did not know how to use prior to this class. I have even taken some of the equation functions and applied them to a personal Excel sheet for purchasing a car and determining monthly payments and interest. Personally, learning how to use Excel in this course has been invaluable.”*

Exams

Students are given three on-campus, proctored, paper-and-pencil exams covering 5–7 chapters each, including a non-comprehensive final exam. Midterm exams are comprised of five multi-part numeric problems, and students have 90 minutes for completion. The final exam includes six multi-part problems, and students have two hours for completion. Exams are closed book, but students are allowed a single note page.

Assessments

- 30% MyLab homework assignments
- 30% Midterm exams (2)
- 20% Final exam
- 10% MyLab Excel projects
- 5% Wharton Research Data Service project
- 5% Participation

Results and Data

Students were placed into two groups based on their average MyLab homework score, identifying the following (figure 1):

- 84% of students scoring above average on MyLab homework earned an A, B, or C as their average exam grade, showing mastery of course content.

For students, the formative MyLab homework assignments are intended to help them identify where they are in terms of successfully completing the summative course exams. 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 exams.

Exam letter grades based on MyLab homework score

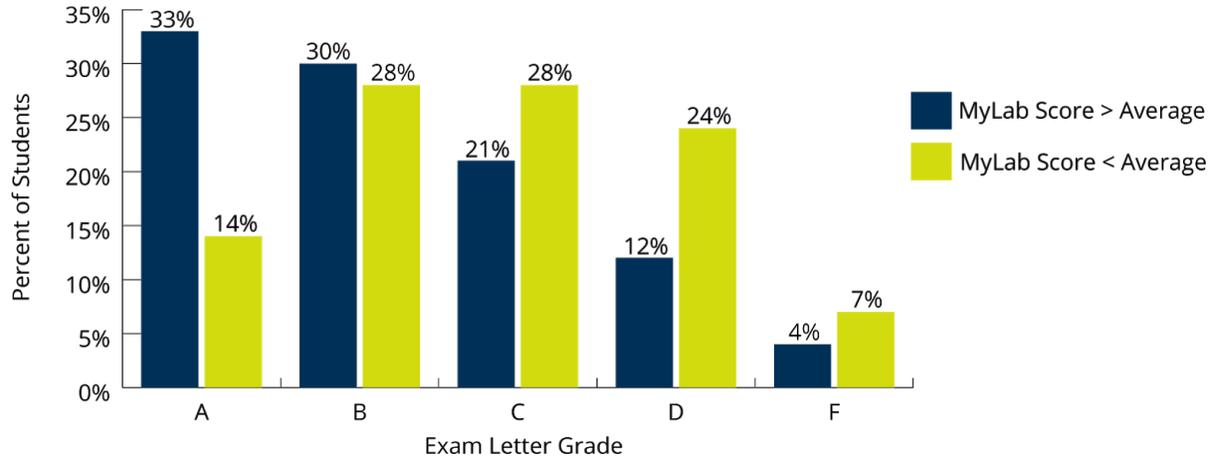


Figure 1. Relationship between Exam Letter Grades and Average MyLab Homework Scores, Spring 2018 (n=96)

Students were divided into two groups based on their average MyLab assignment score. Data show that students who scored above average on MyLab homework had average final course scores 10 percentage points higher than students who scored below average (figure 2). For students in Nelson's course, the MyLab assignments are intended to help them identify where they are in terms of successfully completing the course requirements.

Average final course score based on MyLab homework score

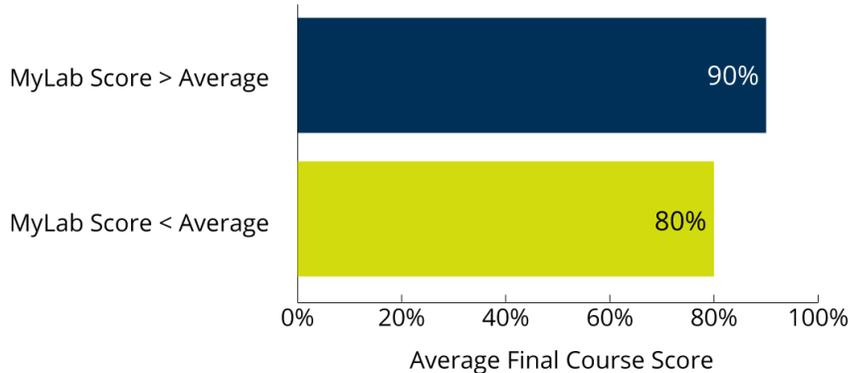


Figure 2. Average MyLab Assignment Score and Average Final Course Score, Spring 2018 (n=96)

The Student Experience

Responses from a voluntary, Spring 2018, end-of-semester survey of Nelson's students indicate that the majority of responding students recognize the value of MyLab Finance.

- 94% of respondents agreed that their understanding of the course material increased as a result of using MyLab
- 94% of respondents agreed that use of MyLab provided additional resources that helped them learn more than they would have from traditional paper-and-pencil homework
- 92% of respondents agreed that use of MyLab positively impacted their exam scores
- 96% of respondents agreed that they would recommend MyLab to another student

Student comments when responding to the question, “What were the benefits of MyLab?” include:

- *“The ability to walk through examples and see where I was going wrong was very helpful and the ability to rework problems and improve my score prevented me from feeling completely defeated.”*
- *“I enjoyed being able to get immediate feedback about homework problems as well as View An Example which walked me through the more difficult problems.”*
- *“The ability to work through problems and understand them, rather than just going through the motions.”*
- *“I use it as a study tool, especially when working on formatting my formula sheets for tests. Also, this allowed me to work ahead to better balance my school/work schedule when I could to ensure I was never behind on my work.”*
- *“To be able to go back and review the homework prior to the exam was a big help to be successful on the exams.”*

Conclusion

In Nelson’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 Nelson’s students something paper-and-pencil homework cannot, helping them quickly identify areas of both strength and weakness, leading to more focused practice opportunities. Students on the end-of-semester survey 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.