

MyFinanceLab

School Name *Anonymous*

Course Name *Financial Management*

Course Format *Flipped, blended*

Key Results

In this blended, flipped classroom, students who completed most MyFinanceLab assignments earned final course grades that were 13 percentage points higher than students who skipped two or more assignments. For every missing My FinanceLab homework assignment, data show an average drop of four percent in the final course grade earned.

Course materials

MyFinanceLab with Enhanced eText

Setting

This 4-year public liberal arts college, located in a remote part of the Rocky Mountains, serves approximately 3,800 students, 37 percent of whom live on campus. Fifty-two percent of students are men, 43 percent identify as non-Caucasian, and more than 20 percent represent one of 155 American Indian tribes or Native Alaskan villages.

Financial Management is a one-semester four-credit course taken by junior and senior business majors and enrolls approximately 60 students each semester. An introductory course, it focuses on financial mathematics, analysis, and decision making. Topics include the time value of money, valuation of stocks, bonds, other securities, and firm investments. Additional topics include the impact of risk and return on business decision making and the use of spreadsheets to model business decisions.

Students completing Financial Management are expected to demonstrate an understanding of basic financial planning terms and concepts relevant to personal financial planning such as financial statement preparation, tax planning, money and credit management, risk management through insurance, and investment basics. Upon completion of the course, students should be able to:

- Calculate interest rates and use financial mathematics to estimate the time value of money and the valuation of investment projects.
- Understand the impact of risk/return on decision making and how to estimate project cash flows, then use those estimates to analyze capital budgeting projects using IRR, NPV, and sensitivity and scenario analysis with Excel.
- Design functional spreadsheets for use in modeling financial decision making, using time value of money functions and formulas in Excel.

Challenges and Goals

When the instructor decided to implement a flipped classroom in 2012, he was looking for an online program that would provide his students with the homework problem solving they need to be successful in the finance industry. However, because he encourages student group work, particularly for homework so that both peer-educating and learning can take place, he also wanted the digital program to include a mechanism that would provide algorithmically-generated problems.

MyFinanceLab was the one online program he identified that could provide the necessary algorithmically-generated problems. The instructor theorized that this opportunity for repeated practice of similar problems would help students understand what they are doing and be able to teach a concept to another student when working in a group.

Implementation

Due to the flipped/blended nature of this course, the instructor makes a collection of short five- to ten-minute videos available to his students as an additional resource; each video discusses one or more topics covered in the course content. While not required, students are urged to review the videos because he is not able to cover all topics in lecture—generally, the more difficult concepts are covered in class—and the videos cover most of the other course content. Students are asked to read the textbook before viewing the videos so that they are familiar with the terminology. Students are expected to take notes as they watch and listen, and can pause and rewind the videos as needed.

Students complete textbook problems and cases assigned for homework in MyFinanceLab and are allowed three attempts at each problem. All assignments are due by 11 PM on the due date; assignments that include the less complex problems are due during the week, and a more challenging set of homework problems is due on Saturday.

Teamwork and collaboration are strongly encouraged; students work in learning teams assigned by the instructor who believes that “learning occurs most effectively when students are actively engaged with their peers.” The algorithmic nature of MyFinanceLab is critical to this component of his flipped classroom because students can practice on their own until they fully understand a concept and the corresponding solution to the homework problem. This, in turn, enables them to teach the concept to other students. Additionally, because the algorithm changes the problem, students cannot rely on being able to answer just one problem, but need to understand the concept well enough to apply it to varying problems.

The most complex MyFinanceLab problems are completed in a Google Docs spreadsheet that is populated with part of the assignment and provides students background on what features they need to include in their responses. The final spreadsheet document is graded based on the accuracy of the problem-solving as well as how well the student implemented the use of the Google spreadsheet in their assignment.

The midterm exam is a take home, paper-and-pencil test; students have one week to complete the exam, and all resources are available to them. The exam is challenging, with students averaging 76 percent. Miscellaneous Canvas (LMS) assignments are posted throughout the semester and contribute to the student’s final grade.

Assessment

40 percent	MyFinanceLab homework assignments
30 percent	Midterm exam
15 percent	MyFinanceLab Google spreadsheet
15 percent	Canvas assignments

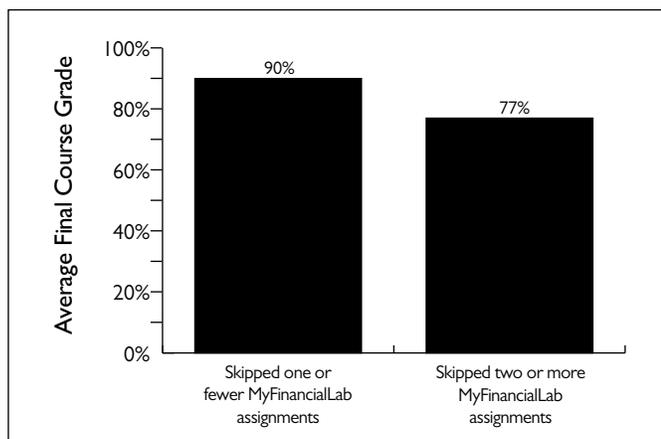


Figure 1. Relationship between MyFinanceLab Homework Completion and Final Course Grade, Fall 2014 (N= 60 total: n= 31 Skipped one or Fewer Assignments, n= 29 Skipped Two or More Assignments)

Results and Data

MyFinanceLab homework completion rates were analyzed to determine the influence of completion on the final course grades (Figure 1). Results show that students who completed most assignments received significantly higher final course grades (MyFinanceLab is 40 percent of the final course grade, influencing this relationship):

- Students who skipped one or fewer assignments had average final course grades 13 percentage points higher than students who skipped two or more assignments.
- Average number of skipped assignments overall: 1.8
- Students who completed all assignments for Chapters 1–5 had an average midterm exam grade nine percent higher than students who skipped at least one assignment (n= 1 average skipped assignments for Chapters 1–5).
- Eighty percent of students earning an A on the midterm exam completed all assignments.

Figure 2 looks further at the homework completion rate, examining how skipping one additional assignment affects the final course grade. Analysis shows an average drop of four percent in the final grade for every missing MyFinanceLab homework assignment, with a substantial drop-off occurring when students skip three or more assignments.

Figure 3 is a correlation graph; correlations do not imply causation but instead measure the strength of a relationship between two variables. The corresponding *p*-value measures the statistical significance/strength of this evidence (the correlation), where a *p*-value <.01 confirms the existence of a positive correlation between these two variables. The correlation between

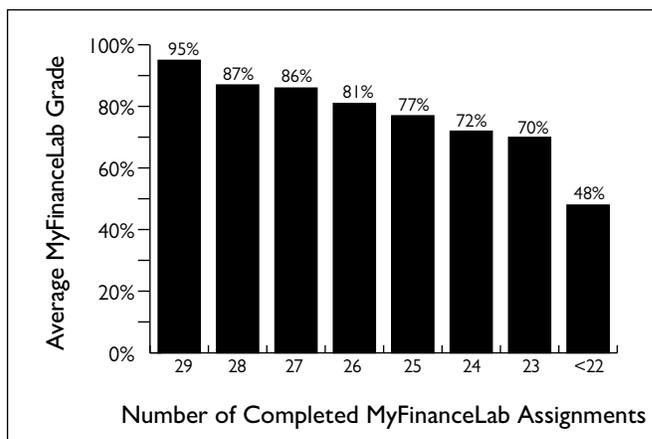


Figure 2. Relationship between MyFinanceLab Homework Completion and Average MyFinanceLab Grade, Fall 2014 (n=60)

“MyFinanceLab keeps students on task—they have to keep up—and it helps prepare them for face-to-face class meetings.” —Instructor

MyFinanceLab homework grades and final grades is examined in Figure 3, where $r = .8$ and $p\text{-value} < .01$, indicating a very strong positive relationship between the two variables (MyFinanceLab is 40 percent of the final course grade, influencing this correlation).

- Students earning an average final course grade of A scored an average of 95 percent on MyFinanceLab assignments.
- Students earning an average exam letter grade of D/F scored an average of 60 percent on MyFinanceLab assignments.

For students, the MyFinanceLab homework grade is intended to help them identify where they may be in terms of exam preparation and course completion. As a best practice, the MyFinanceLab assignment grade is intended to help instructors identify students early on who are struggling and might be at risk of poor exam performance.

Figure 4 shows the midterm exam grade distribution based on average MyFinanceLab homework scores for the corresponding chapters (1–5). As anticipated, an important relationship exists where students who earned higher exam scores (A or B) on their midterm also earned higher MyFinanceLab grades for those same chapters. This analysis looked at homework for only Chapters 1–5 which corresponded to the midterm exam, given that there was no corresponding final exam for the remaining chapters.

- Students earning an A on the midterm exam scored an average MyFinanceLab grade of 96 percent.
- Students who earned high achieving exams scores (A/B) had MyFinanceLab scores seven percentage points higher than students who earned a C/D/F on the midterm exam.

The Student Experience

A voluntary student survey conducted at the end of the Fall 2014 semester revealed the following (82 percent student response rate):

- 85%** Indicated their understanding of the course material increased as a result of using MyFinanceLab.
- 83%** Said use of MyFinanceLab positively impacted their exam scores.

Student comments, when asked what they liked most about MyFinanceLab, included:

“‘Help me solve this’ was a VERY useful tool, I always used it and would have done poorly without it.”

“The step-by-step help on problems, online eText, and instant grading.”

“How it gave similar problems you could work through. That really helped me better understand the material.”

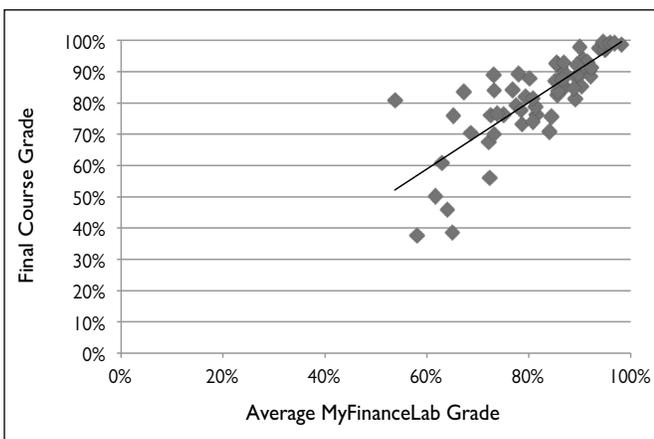


Figure 3. Correlation between Average MyFinanceLab Homework Grade and Final Course Grade, Fall 2014 (n = 60)

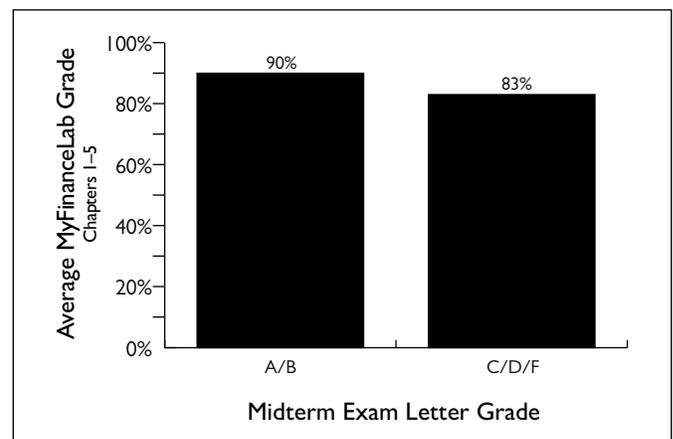


Figure 4. Comparison of Average MyFinanceLab Homework Grade, Chapters 1–5, and the Average Midterm Exam Grade, Chapters 1–5, Fall (n = 60)

“I liked the in-question help with problems because it helped me understand problems when I faced mental roadblocks.”

“It made it easy to get homework done and turn it in no matter where you were. Also it’s nice to have instant feedback on how you did so you can learn from your mistakes.”

Conclusion

“MyFinanceLab keeps students on task—they have to keep up,” reports the instructor, “and it helps prepare them for face-to-face class meetings.” In a blended course like his, this instructor believes he cannot afford to have students fall behind, and in a flipped classroom, he wants to know that students are attending class prepared and ready to engage in discussion and other peer-to-peer activities. Classroom success depends on students completing the necessary groundwork for active participation to take place.

A best practice this instructor endorses is to start slowly with the MyLab assignments and add on each semester as needed. “Starting out with too many assignments or using too many program enhancements can initially create confusion for both student and instructor until a pattern is established and learned. Be accepting of early miscues, both instructor and MyFinanceLab related, make adjustments in real time, and then make more permanent corrections the following semester. Expect some minor bumps initially, as it is worthwhile in the long run!”

Implementation and results case studies share actual implementation practices and evaluate possible relationships between program implementation and student performance. The findings are not meant to imply causality or generalizability within or beyond these instances. Rather, they can begin to provide informed considerations for implementation and adaptation decisions in other user contexts. For this case study, mixed-methods designs were applied, and the data collected included qualitative data from interviews, quantitative program usage analytics, and performance data. Open-ended interviews were used to guide data collection.