MyLab Financial Accounting educator study

A look at homework completion and exam scores at Robert Morris University

Key findings:

- Data indicate a strong correlation between average MyLab™ homework scores and average exam scores.
- Students who completed all MyLab homework assignments earned average exam scores 14 percentage points higher than students who skipped at least one assignment.
- 96 percent of student survey respondents agreed that their understanding of the course material increased as a result of using MyLab.

Setting

Locale: small, urban, not-for-profit, four-year university with a main campus in Chicago and eight satellite campuses, including Orland Park.
Enrollment: over 3,000 students
Freshman retention rate: 49 percent
Four-year graduation rate: 47 percent
Student-faculty ration: 23:1
Classes with 20 or fewer students: 51 percent
Gender: 50 percent male
Diversity: 63 percent ethnic minority

School name: Robert Morris University - Illinois, Orland Park, IL

Course name: Financial Accounting I

Course format: Face to face and blended

Course materials: MyLab Accounting with *Financial Accounting* by Harrison, Horngren, Thomas, and Tietz

Timeframe: Spring 2017

Educator: Thomas Bednarcik, Professor and Associate Curriculum Chair

Results reported by: Candace Cooney, Customer Outcomes Analytics Manager

About the course

Thomas Bednarcik has been teaching accounting courses for approximately 17 years at Robert Morris. Financial Accounting is a four-quarter hour course that is the first of three courses in the introductory sequence, enrolling approximately 800 students per year. The course is required of all business students. Financial accounting presents an introduction to financial practices and procedures and covers topics including the accounting equation as it applies to corporate accounting, ratio analysis of business activities, and merchandising operations. Students completing the course will:

- Gain a greater appreciation for business in general, specifically the world of accounting;
- Engage in the learning process with meaningful teaching and collaboration involving real-world applications;
- Develop the ability to think critically, to analyze, evaluate, and integrate ideas, and to formulate informed, reasonable beliefs and positions on significant problems and issues; and
- Take responsibility for monitoring and assessing their own thinking and learning, as well as communicate more effectively through writing.

Challenges and Goals

Bednarcik had been using another publisher's textbook and digital program for several years, but issues with that online product prompted him to consider other options. Seeking a program with a variety of digital resources for self-learning, Bednarcik was interested in the experience-based learning focus of MyLab Accounting. The flexibility of MyLab and ability to assign algorithmic problems for greater practice opportunities led Bednarcik to adopt MyLab for his Fall 2016 classes.

Implementation

Bednarcik's course is delivered using blended learning techniques, incorporating MyLab Accounting and Blackboard, the Learning Management System (LMS) at RMU. The class is conducted using a combination of lecture, discussion, problem solving, and cooperative learning techniques. Lecture and discussion are used to clarify and expand upon information in the textbook and problem solving provides an opportunity to use critical thinking skills to solve accounting situations. Students are expected to prepare solutions to homework assignments prior to lecture, and homework is discussed as completely as possible. Additionally, cooperative learning provides an opportunity to practice critical thinking and teamwork skills.

Learning Management System Integration

Pearson's Learning Management System (LMS) integration service gives students and instructors easy access to MyLab from their existing school LMS. Bednarcik chose to integrate his MyLab course with Blackboard 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 Blackboard and there is one single gradebook for the course; and
- Content linking: ability to link to MyLab directly from Blackboard.

Bednarcik's students have just one access code and a single sign-in process instead of the need to log in to Blackboard 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 (79 percent response rate) in Spring 2017:

- 96 percent of respondents strongly agreed or agreed that they were able to access MyLab through D2L and appreciated not having a separate, second log in and password for MyLab.
- 92 percent of respondents strongly agreed or agreed that the log in and registration process for MyLab through Blackboard was quick and simple.

MyLab Accounting

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. Bednarcik's goals for assigning work in MyLab are to introduce new concepts, provide homework and practice opportunities, and to help students assess their own understanding of the course material and track their progress. He anticipates that students will spend at least 2 hours per week working in MyLab. Students confirmed this on the end-of-semester survey: 38 percent of respondents indicated they spent 2–3 hours working in MyLab, and an additional 31 percent said they spent more than three hours per week in the program.

Bednarcik spends approximately 30 minutes on the first day of class walking students through the MyLab registration process and modelling how to navigate the homework assignments, eText, videos, and other resources. Providing students with First Day of Class resources is a Pearson MyLab best practice that gives students a positive start to their digital homework experience and may lead to fewer questions and confusion during the critical start-up period.

Graded MyLab assignments consist of approximately 15 short exercises, as Bednarcik believes students may learn better when working with bite-sized pieces. He embraces another Pearson best practice and uses question metrics when creating an assignment, so he knows approximately how long the homework assignment should take and how challenging it will be.

To promote practice as a key component for success, students have three attempts at completion, and learning aids are turned on. Learning aids provide hints and assistance on a just-in-time basis as students work through the assignment. On the end-of-semester survey, 73 percent of respondents reported that they always or usually take advantage of the learning aids when having trouble starting or completing a problem. As one student stated when identifying the benefit of MyLab, "When you are stuck on a problem at home, MyLab has options that guide you through the problem to find the answer." Bednarcik also explains the other MyLab study tools to students and suggests they use whatever additional practice they may need. On the end-of-semester survey, 73 percent of respondents claimed to use at least one other optional study tool in MyLab, including 65 percent who used the eText, 35 percent who used the Study Plan, and 15 percent who used the Dynamic Study Modules.

Bednarcik utilizes the Real World Accounting videos in MyLab as the basis for two writing assignments during the quarter. He crafts his own question prompts for the videos from chapters 5 and 8, and students are assigned a memo, email, or other form of business communication for their response.

Quizzes and in-class assignments are given during the quarter. In Spring 2017, students completed two paper-and-pencil quizzes comprised of ten, multiple-choice questions, similar to Quick Check questions in the textbook. They are open book/open notebook and are usually given toward the end of chapter so Bednarcik can identify any topics the class as a whole may be challenged by. Four paper-and-pencil exams are administered, including a comprehensive final

exam, consisting of 40– 50 multiple choice questions with a few numeric problems chosen from the test bank. Most questions are similar in terms of difficulty to MyLab homework assignments, but Bednarcik does include a few more challenging questions as well. Students have two hours for completion of each exam.

Assessments

- 50% Exams and quizzes
- 30% MyLab homework assignments
- 10% Writing assignments
- 10% Participation

Results and Data

Data was mapped as 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 strong positive correlation exists between average MyLab homework scores and average exam scores where r=.63 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 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). Bednarcik suggests that the MyLab assignments really work for his students, helping them connect concepts to practice. As a student on the survey said:

> "MyLab let me grow more as a student with the help it provided."

Students were divided into two groups based on their completion of MyLab homework assignments. Students who completed all assignments earned significantly higher average exam scores than students who skipped at least one assignment.

Students who completed all assignments had average exam scores 14 percentage points higher than students who skipped at least one assignment.

The Student Experience

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

- 96 percent of respondents strongly agreed or agreed that their understanding of the course material increased as a result of using MyLab.
- 85 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.

- 96 percent of respondents strongly agreed or agreed that they would recommend MyLab to another student.

Student's responses to the question 'What are the benefits of MyLab for you as a student' include:

"The ability to practice and learn the material outside of class, along with the tools to help solve any of the homework questions in MyLab."

"I liked being able to try the problem over again or try a similar problem as many times as I needed to in order to understand the problem."

"MyLab allows me to check my answers before I move on to the next part of the problem. If I get the first part wrong, it will affect the rest of the assignment."

"When you are stuck on a problem at home, MyLab has options that guide you through the problem to find the answer."

"MyLab allows you to be wrong, but also to correct the mistakes you are making."

Conclusion

Bednarcik recognizes that students need practice to be successful in accounting, and after moving to MyLab from another publisher's program, he has appreciated the variety of resources that can be assigned or used in a self-study format for his students. In his Spring 2017 class, students completing all MyLab homework assignments performed better on exams than students who skipped one or more assignments, and most students on the end-of-semester survey indicated that their understanding of the course material increased as a result of using MyLab. "MyLab really seems to be working for my students," said Bednarcik, "I think they learn by doing, and MyLab is providing the practice they need."

As a new adopter of MyLab, Bednarcik would like to increase his use of the unique MyLab features and intends to incorporate additional MyLab functionality like the Dynamic Study Modules in future semesters.