Pearson

MyLab MIS educator study explores the benefits of simulations at Stony Brook University

---

Key Findings

- Students scoring above average on MyLab assignments earned quiz scores eight percentage points higher than students scoring below average on MyLab assignments.
- Data indicate a strong, positive correlation between MyLab assignment scores and quiz scores.
- On an end-of-semester survey, 91% of respondents agreed that the Decision-Making Sims in MyLab MIS allowed them to practice business decision-making skills and to understand the impact of their decisions.

Study Specifics

School: Stony Brook University, Stony Brook, NY
Course name: Technology in the Workplace
Course format: Online
Course materials: MyLab MIS for *Experiencing MIS* by Kroenke

Timeframe: Fall 2018
Educator: Rita Reagan-Redko, Lecturer
Results reported by: Candace Cooney, Pearson Results Manager

Setting

- Locale: large, suburban, public, sea-grant, space-grant, four-year university located 60 miles east of New York City
- Enrollment: more than 26,000 students
- Freshman retention rate: 89%
- Four-year, first-time graduation rate: 63%
- Ethnicity: 36% Caucasian, 36% Asian,11% Hispanic, 9% African-American, 8% Other

About the Course

Rita Reagan-Redko has been teaching at Stony Brook University for 20 years. Technology in the Workplace is a one-semester, three-credit course open to all students enrolling approximately 500 students per year. The class is part of the Science or Technology and the Arts, Humanities, or Social Sciences curriculum, which explores the interconnectedness between these disciplines. The course is a study of automation and information technologies in the manufacturing and services industries and considers how technology is changing the work and lives of everyone from production workers to executives.

Challenges and Goals

Creating assignments, identifying useful, relevant examples, and producing realistic writing assignments to make online courses interactive requires significant time that most instructors don't have. Tasked with creating quizzes in Blackboard and grading both papers and discussion board assignments by hand, Reagan-Redko sought a digital solution that could minimize the task of creating and grading assignments and assessments. She adopted MyLab™ MIS in 2014, first using only the chapter quizzes. Two years later, she enhanced her course by adding the simulations and videos to her assignments, and in Spring 2018 she introduced auto-graded writing assignments as well.

Implementation

Conscious of the fact that course materials can be expensive, Reagan-Redko gives her students options when purchasing MyLab and the textbook. On a Fall 2018 end-of-semester student survey, 75% of respondents indicated they purchased the low-cost MyLab code with eText, forgoing a print text completely.

Students use MyLab for understanding content, homework assignments, and quizzing. On the student survey, 41% of respondents indicated they spent 2–3 hours working in MyLab each week, and 13% of students spent more than three hours in the program. MyLab assignments include:

Video case studies: These visual cases help students check their understanding of the chapter material and reinforce basic concepts. Each 10-minute video case is followed by five multiple-choice questions, providing an opportunity for students to apply what they are reading to the real world. In total, four video case studies are assigned.

Decision-Making Sims: Simulations ask students to apply course concepts to realistic business challenges they are likely to experience in their future careers. Students make a series of decisions, and the simulation then branches, creating various scenario paths based on answers given. This personal learning experience provides an opportunity for Reagan-Redko's students to build and develop their critical thinking skills. In total, 12 simulations are assigned. On the end-of-semester survey, students indicated the following:

- 89% of respondents agreed that the simulations in MyLab provided a real-world application of the chapter material that allowed them to apply course concepts to realistic business challenges.
- 91% of respondents agreed that the simulations allowed them to practice business decision-making skills and to understand the impact of the decisions they were making.
- 95% of respondents agreed that the simulations were a different and engaging way of working with the chapter concepts.

Student survey comments regarding the simulations include:
- *"They gave an in-depth results page so I was able to understand why an option I chose was not good or just good instead of excellent."*
- *"They were real-life situations that I had to make important decisions about."*
- *"I like how on some of the assignments you really had to think about the right decision. If you chose the wrong answer, the next page showed what you chose and what the consequences of the decision were."*
- *"There was a visual aspect to the simulations and they put you in practical situations."*

Writing Space: Writing assignments play a key role in helping students develop the analytical and critical-thinking skills they need for success and offer Reagan-Redko's students the practice they need without sacrificing her time or the quality of the assessment. Using a customizable rubric, the auto-grading feature of Writing Space immediately scores student essays using artificial intelligence to go beyond recognizing key words and phrases and actually understands language and the nuances of meaning. Students have two attempts at submission for their writing assignments. On the student survey, 82% of respondents agreed that the writing assignments in MyLab helped improve their critical-thinking and analytical skills.

MyLab quizzes: Quizzes comprised of 25 multiple-choice questions are assigned weekly. Students have one attempt for completion and no time limit. Quizzes are open-book but must be completed once the quiz has been opened. In total, 12 quizzes are assigned.

On the end-of-semester survey, 93% of respondents agreed that the above-mentioned resources in MyLab MIS made the program a good value for the course.

Assessments

- 40%   MyLab video exercises (4) and writing assignments
- 30%   MyLab chapter quizzes (12)
- 30%   MyLab Decision-Making Sims (12)

Results and Data

Students were divided into two groups based on their average MyLab assignment score (MyLab video exercises and MyLab Decision-Making Sims). Data show that students who scored above average on MyLab assignments earned average MyLab quiz scores eight percentage points higher than students who scored below average (figure 1).

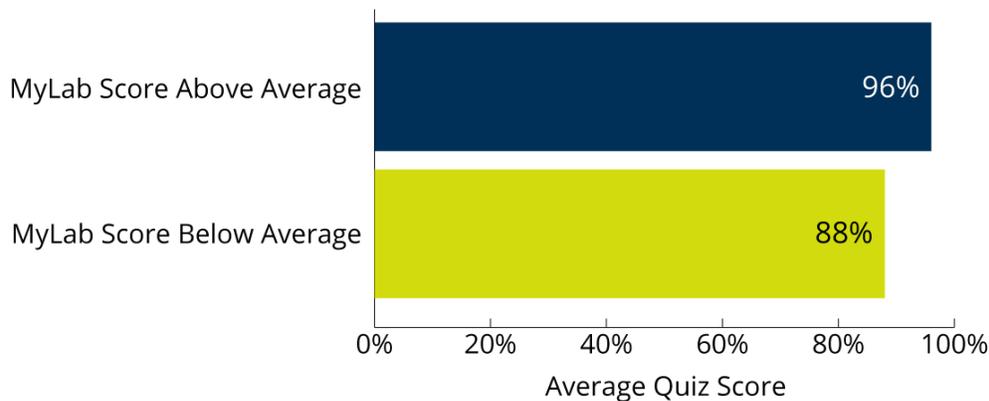**Average MyLab quiz score based on average MyLab assignment score**

Figure 1. Average MyLab Quiz Score Based on Average MyLab Assignment Score, Fall 2018 (*n*=202)

For students, their scores on the formative MyLab homework assignments are intended to help them identify potential gaps that exist in their understanding of the chapter content, and these homework scores may also indicate to students how successful they will be when completing the summative MyLab quizzes. On the end-of-semester student survey, 100% of respondents agreed that the use of MyLab MIS positively impacted their quiz scores. Empirically, Reagan-Redko agrees that the MyLab homework should have a positive impact on quiz scores, as practice is a cornerstone for overall course success. In fact, the correlation between MyLab assignments and MyLab quizzes is strong and positive, where $r=.69$ and p-value <.05. This connection does not indicate causation but instead measures the strength of the relationship between these two variables; the closer r-value is to 1.0, the stronger the correlation.

The Student Experience

Responses from the end-of-semester survey of Reagan-Redko's students indicate that the majority of responding students recognize the value of MyLab MIS.

- 97% of respondents agreed that their understanding of the MIS course material increased as a result of using MyLab MIS.
- 100% of respondents agreed that the use of MyLab MIS positively impacted their quiz scores.
- 84% of respondents agreed they would recommend the use of MyLab to other students.
- 93% of respondents agreed that the resources in MyLab MIS made it a good value for the course.

Student comments when asked, "What were the benefits of MyLab?" included:

- *"The benefit of MyMISLab was learning about real-life events that may take place in the workspace and how to handle them."*
- *"MyLab was very easy to work with and the simulations and quizzes really allowed for a deep understanding of the material."*
- *"MyMISLab was an organized way to view assignments and materials in one place. It made it easy to review what needed to be done when and also made textbook access easy."*
- *"Having the ability to add in notes while reading the textbook. The simulations also provided real-world scenarios so that we could fine tune our critical thinking."*

Conclusion

Large class sizes can create a barrier to meaningful homework assignment and completion, particularly when the course is online. Knowing that students need practice to be successful in the course, Reagan-Redko sought a digital solution to assist with assignment creation and assessment grading. For the most part, MyLab eliminates the need for grading assignments by hand, but more importantly, it offers Reagan-Redko the opportunity to assign writing exercises and simulations that foster critical thinking. As one student said on the survey, "The simulations taught me practical knowledge about the workplace," summing up how the simulations allow students to see how their individual decision-making might impact corporate results in the real-word.