

## MyLab Marketing educator study examines test scores and the use of Mini Simulations at the New Jersey Institute of Technology

<p><b>School name</b> New Jersey Institute of Technology, Newark, NJ</p> <p><b>Course name</b> Principles of Marketing</p> <p><b>Course formats</b> Online and face to face</p> <p><b>Course materials</b> MyLab Marketing with <i>Marketing: An Introduction</i> by Armstrong and Kotler</p>	<p><b>Timeframe</b> Fall 2017</p> <p><b>Educator</b> Melodi Guilbault, Senior University Lecturer</p> <p><b>Results reported by</b> Candace Cooney, Pearson Customer Outcomes Analytics Manager</p>
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### Key Findings

- Students with MyLab assignment scores above average earned test scores 14 percentage points higher than students who scored below average on MyLab assignments.
- Students who earned an A or B average test grade skipped fewer MyLab assignments on average than students earning a C or D average test grade.
- 95 percent of student survey respondents agreed that the Mini Simulations in MyLab provided a real-world application of the chapter material that allowed them to apply course concepts to realistic business challenges.

### Setting

- Locale: large, urban, four-year, polytechnic university located in northern New Jersey, and a leader in STEM education and research. Principles of Marketing is taught in the AACSB-accredited [Tuchman School of Management](#).
- Enrollment: 11,400 students
- Graduation rate: 61 percent

- Student-faculty ratio: 17:1
- Classes with fewer than 20 students: 37 percent
- Gender: 75 percent male
- Ethnicity: Caucasian – 28 percent, Asian – 21 percent, Hispanic – 21 percent, African American – 7 percent

## About the Course

Melodi Guilbault has been teaching for approximately 19 years and has been at New Jersey Institute of Technology (NJIT) for the last five years. Principles of Marketing is a three-credit, entry-level course enrolling approximately 300 students per year. The course is required of business students, but because Business is the largest minor on campus, it brings in students with diverse academic backgrounds, 65 percent of whom are sophomores/juniors, and 75 percent of whom are male.

Principles of Marketing is designed to present a broad range of relevant marketing concepts and theories, challenging students to explore the business implications of marketing and to apply their understanding to real-world situations. Course goals include:

- Introduce the role of marketing;
- Explain the interaction of marketing with other business functions and society;
- Study marketing mix development and issues;
- Examine the decisions involved in creating and executing successful marketing strategies; and
- Develop and enhance critical professional skills, including analytical abilities, written presentation skills, and teamwork.

## Challenges and Goals

When Guilbault started teaching at NJIT, a Pearson textbook was currently in use. Familiar with using online technology as a course component from her previous teaching position, Guilbault chose to implement MyLab™ Marketing in 2013 as a way to ensure that her students covered the basic concepts on their own, so she could engage in more experiential and real-world application in the classroom.

As MyLab Marketing has continued to add new resources, Guilbault has modified her assignments over time as well, to include new assignment types and experiences. **In Fall 2017, she added the MyLab Mini Simulations to her course to give her students an opportunity to apply the course concepts and develop their decision-making skills.** Regardless of course format — online or face to face — the variety of assignments in MyLab allow students to have a similar course experience.

An instructor may have other external considerations before deciding to adopt educational technology, including price. Guilbault believed that the eText option in MyLab offered a cost-effective solution for those students interested in cutting down on the expense of course materials. “Also, if there is value in the work they are being asked to do, students will find it worthwhile,” said Guilbault. In fact, on an end-of-semester survey of her students, **94 percent of respondents strongly agreed or agreed that the resources in MyLab made the program a good**

**value for this course.** Guilbault wanted to offer her students options, however, when purchasing their course materials. Students shared the following on the student survey:

- 82 percent purchased the all-digital solution (MyLab and eText only)
- 9 percent purchased the MyLab code and a used, print textbook
- 7 percent purchased the MyLab code and a print, loose-leaf version of the textbook
- 2 percent purchased the MyLab code and a new, print textbook

Explaining why they chose the eText, students disclosed these reasons:

- 51 percent of students chose the MyLab code with eText option because it was the least expensive choice.
- 29 percent of students chose the MyLab code with eText because it allows them to access their textbook anywhere, anytime.

One student said, “My books were given to me, so I didn’t have a choice, but I do prefer the eText,” while another revealed, “It was cheap, access anywhere, and go green!”

## Implementation

MyLab Marketing is required. For online students, the program is used primarily working at home on a personal computer. Guilbault’s face-to-face class is held in an active-learning classroom, where students sit at ten tables grouped for active participation. Students bring their own device, and all information on student devices can be projected and shared. Students use MyLab for understanding content and completing homework assignments and assessments. Guilbault estimates that students in her face-to-face section will spend about an hour per week on MyLab assignments, more if they use the eText for reading, which most do. On the student survey (91 percent total response rate):

- 59 percent of respondents in the face-to-face section said they spent 1–2 hours in MyLab, and another 29 percent spent more than two hours in the program.
- 38 percent of respondents in the online sections said they spent 1–2 hours in MyLab, and another 38 percent spent more than two hours in the program.

Guilbault views the MyLab assignments as formative — an opportunity for students to experiment and learn. They are completed weekly and consist of chapter warm-ups, video questions, and marketing metrics assignments. Marketing metric questions provide students with a mini-case study around one specific concept, and students are tasked with calculating a numeric response. On the student survey:

- 98 percent of students strongly agreed or agreed that marketing metrics exercises allowed them to practice analytical skills and see the quantitative aspects of Marketing.

Students also complete chapter quizzes with questions chosen purposefully to reference covered learning outcomes. Students have two attempts to answer most assignments and quizzes.

### MyLab Mini Simulations

Students also complete [Mini Simulations](#) in MyLab. These simulations ask students to apply course concepts to realistic business challenges they are likely to experience in their future careers, covering topics like marketing mix, marketing research, creating customer value, and strategic marketing. Students make a series of decisions, and the Mini Sim branches, creating various scenario paths based on answers given. This personal learning experience provides an opportunity for Guilbault's students to build and develop their critical thinking skills. In her face-to-face sections, students complete the simulations in class. Guilbault notes, "Students really enjoy changing the decision paths to see how the different decisions impact results." Students in online sections may attempt the simulations as many times as they want before submission, to experience the variety of results that different decisions can create. On the end-of-semester survey, students indicated the following:

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

Student survey comments on the Mini Sims include:

- *"The Mini Sims were the greatest benefit for me because it gave a real life simulation of the concepts learned in the course. Anyone can learn a subject, the skill comes with the application."*
- *"[Mini Sims} taught me to think in a different way."*
- *"The Mini Sims taught me concepts that helped in other business classes."*
- *"I always thought they were the most fun and informative because despite making a mistake it lets you continue on and see how things unfold."*
- *"I LOVED the Mini Sim assignments. They were such a great addition."*

### Dynamic Study Modules

Guilbault suggests students attempt the [Dynamic Study Modules](#) (DSM) in MyLab if they are struggling with the chapter material. DSM are questions that continuously assess student performance and activity, using data and analytics to provide personalized feedback in real-time, to reinforce concepts that target a student's strengths and weaknesses. On the student survey, 48 percent of respondents said they always or usually completed the optional DSM.

Both online and face-to-face students complete three open-book, open-note exams in MyLab, each comprised of 50 multiple-choice questions (10 questions per chapter), often including several short answer essays. They have three hours for completion. In addition, face-to-face sections create two *Markatoon* assignments (<https://markatoonist.com/>) including a marketing cartoon and corresponding analysis, a group marketing plan assignment, and other in-class assignments and activities. Online sections creation a marketing video, contribute to web forum and discussion postings, and complete a current news article project.

## Assessments

### Face to face course

- 31% Tests (3)
- 21% Real-world marketing assignment
- 16.5% MyLab assignments
- 10.5% *Markatoon* assignments
- 10.5% In-class activities
- 10.5% Participation

### Online course

- 29% Tests (3)
- 23% MyLab assignments
- 20% Web forum contributions
- 14% Current news article and discussion
- 14% Video assignment and feedback

## Results and Data

Students were divided into two groups based on their average MyLab score. Data show that students who earned above average MyLab scores had average test scores 14 percentage points higher than students who scored below average (figure 1), and the results are statistically significant based on the results of a  $t$ -test where  $t(101)=-3.06$  and  $p<.05$ .

### Average MyLab scores and average test scores

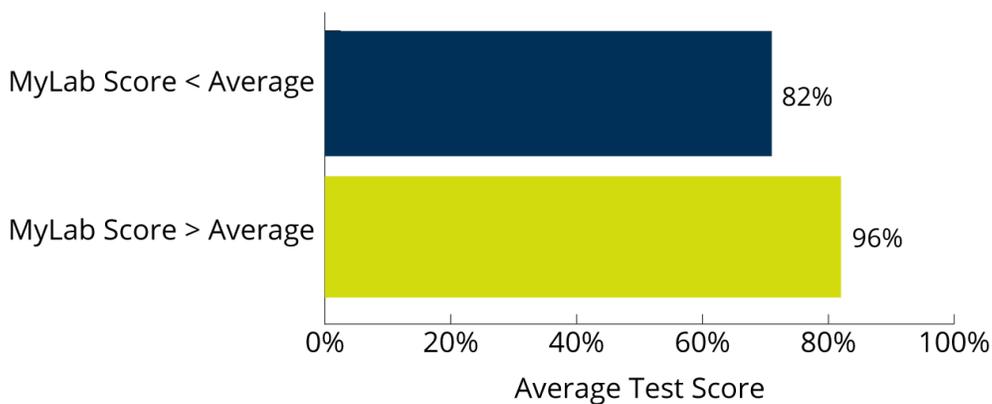


Figure 1. Average Test Score for Students Scoring Above and Below the Average MyLab Score, Online Section, Fall 2017 ( $n=68$ )

In figure 2, numeric average test scores were converted to letter grades using a standard scale where A  $\geq$  90%, B  $\geq$  80%, etc. Students who earned an A or B average test grade skipped fewer MyLab assignments on average than students earning a C or D average test grade. For students, the formative MyLab assignments are intended to help them identify where they are in terms of successfully completing the summative quizzes and tests. Data suggest that if students are not completing MyLab assignments, they may not be aware of potential gaps in their content knowledge until they complete the tests.

### Skipped MyLab assignments and average test grades

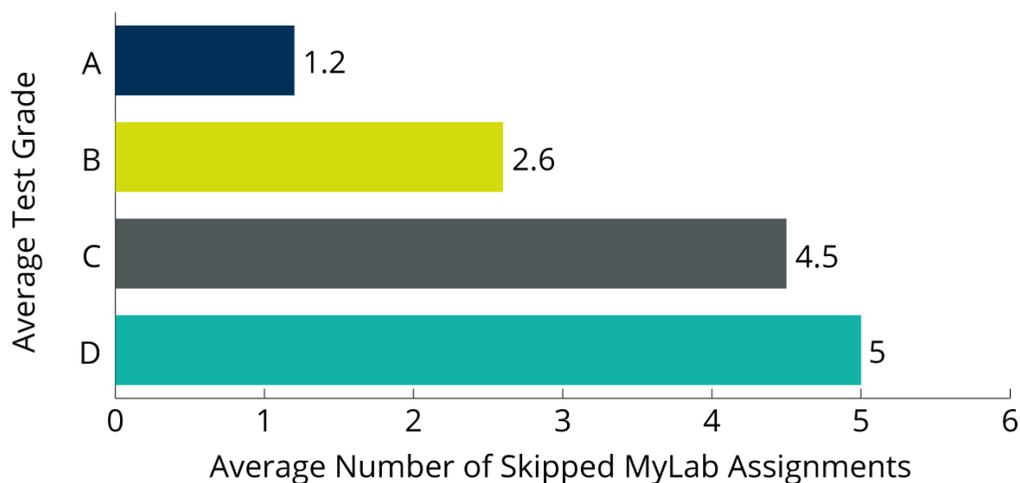


Figure 2. Average Number of Skipped MyLab Assignments Based on Average Test Grade, Online Section, Fall 2017 ( $n=68$ )

Figure 3 is 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 MyLab test scores, where  $r=.69$  and  $p<.001$ .

### Correlation between average MyLab score and average test score

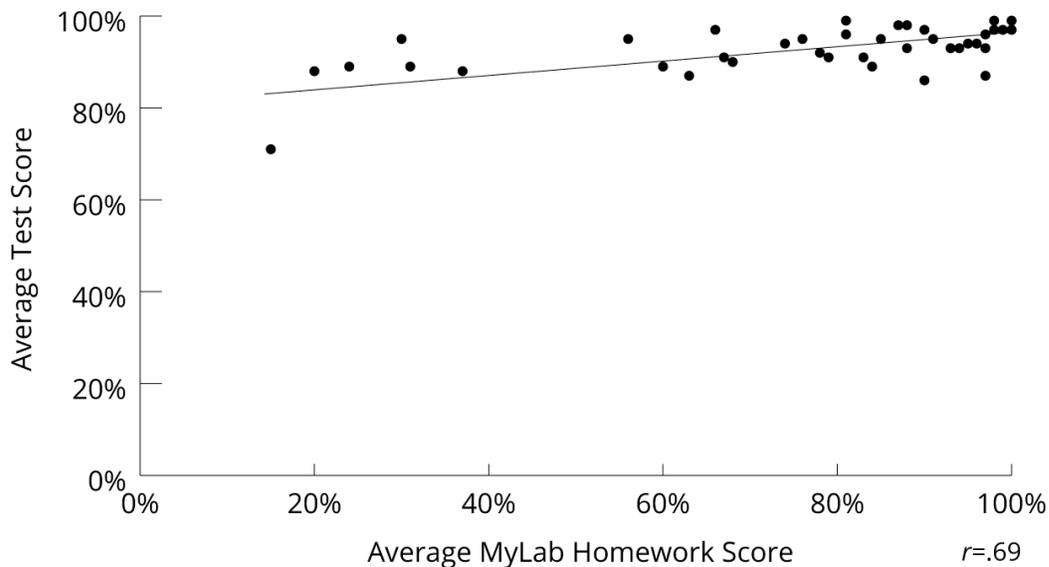


Figure 3. Correlation between Average MyLab Homework Score and Average Test Score, Face-to-Face Section, Fall 2017 ( $n=39$ )

## The Student Experience

Responses from the Fall 2017 end-of-semester survey of Guilbault's students indicate that the majority of responding students recognize the value of MyLab Marketing.

- 96 percent of respondents strongly agreed or agreed that their understanding of the course material increased as a result of using MyLab.
- 92 percent of respondents strongly agreed or agreed that MyLab homework assignments positively impacted their test scores.
- 92 percent of respondents strongly agreed or agreed that they would recommend MyLab to another student.

Students responses to the question "What were the benefits of MyLab?" include:

- *"MyLab helped me gain more knowledge and gave me better understanding of the subject. As a result, I have been getting better exam scores."*
- *"MyLab gave me a better understanding of Marketing as well as helped me see, visually how some processes of marketing work."*
- *"It allowed me to not only learn business concepts, but also apply them in real world applications."*
- *"I am able to understand how business works and why marketing is so important if a company wants to succeed."*
- *"I was able to more effectively study for tests and gauge my performance in class."*

“MyLab helped me gain more knowledge and gave me better understanding of the subject. As a result, I have been getting better exam scores.”  
—Anonymous student on end-of-semester survey

## Conclusion

Initially, Guilbault adopted MyLab Marketing as a way to ensure that her students covered the basic concepts on their own, so she could engage in more experiential and real-world application in the classroom. Introducing the Mini Simulations this past Fall allowed her to further offer her students investigative assignments in class, while helping them practice critical analysis and decision making, two key skills that hiring managers value in candidates. Additionally, offering her students options for purchasing course materials created an opportunity for a large percentage of her students to purchase a lower-cost version of the textbook, while still having access to the variety of resources in MyLab Marketing, which they clearly valued and appreciated. “MyLab allowed me to understand the course material better,” said a student on the end-of-semester survey, echoing Guilbault’s original goal of making students accountable for their own learning outside the classroom.