

MyLab Introduction to Business educator study examines Study Plan scores and quiz and exam scores at Harford Community College

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| <p>School Name Harford Community College, Harford, MD Course name</p> <p>Course name Introduction to Business</p> <p>Course format Face to face, flipped</p> <p>Course materials MyLab Introduction to Business with <i>Business Essentials</i> by Ebert</p> | <p>Timeframe Fall 2016–Spring 2017</p> <p>Submitted by Miriam Huddleston, Assistant Professor</p> <p>Results reported by Candace Cooney, Pearson Customer Outcomes Analytics Manager</p> |
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Key Findings

- Students who used the MyLab Study Plan for select chapters earned substantially higher average quiz scores.
- Students who skipped fewer MyLab assignments than average earned higher quiz and exam scores.
- A majority of students (87 percent) on an end-of-semester survey agreed that use of the Study Plan in MyLab Introduction to Business positively impacted their quiz and exam scores.

Setting

- Locale: mid-sized, rural, two-year institution in northeastern Maryland
- Enrollment: approximately 9,000 credit students
- First time students: 26 percent
- Full-time: 37 percent
- Median age: 21.2 years
- Gender: 57 percent female
- Minority: 27.7 percent

About the Course

Miriam Huddleston has been teaching since 2005, including the last six years teaching Introduction to Business full-time at Harford. Introduction to Business is a one-semester, three-credit course which enrolls more than 1200 students per year. The course introduces students to the American private enterprise system and the forms of businesses that operate within it. Students study the role of business in society, international business activity, the impact of ethics and social responsibility on business, entrepreneurship and small business, and emerging trends in technology, organization and management. Topics covered include economics, management, marketing, accounting and financial management.

Upon satisfactory completion of this course, students should be able to:

- Analyze and assess the private enterprise system in the United States, and compare and contrast it to other world economic systems;
- Identify the concepts of social responsibility and business ethics and describe how they affect business practices;
- Analyze and describe the various functions of business – accounting, finance, management and marketing; and
- Evaluate the use and importance of computers and information technology in each of the functional areas of business and in the conduct of business.

Challenges and Goals

Huddleston and her colleagues, Ryker Hughes and Cindi Lewis, have been using MyLab™ Introduction to Business since Fall 2014. They adopted the program anticipating that MyLab would encourage students to participate more in their own learning and to engage with and read the textbook. Opportunities for student engagement with course materials at home would allow for more experiential work in the classroom, leading to a complete learning experience.

In Fall 2016, the Harford instructors set out to discern if the Study Plan in MyLab would provide a further opportunity for students to engage with the course material outside of class, leading to learning gains validated by course assessments. They chose to pilot the Study Plan with chapters 4 and 10 of the textbook in a semi-controlled environment, where half the students in each section were assigned the Study Plan for chapter 4 and the other half of the students were assigned the Study Plan for chapter 10.

Implementation

[Learning Management System Integration](#)

Huddleston opted to integrate her MyLab course with Blackboard for the following reasons:

- Grade transfer – grades are easily transferable from MyLab to Blackboard and there is one single gradebook for the course;
- Single sign-in process – students are ready to work in MyLab on the first day of class; and
- Content linking – ability to link to MyLab directly from Blackboard.

Huddleston's students now 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 clear-cut way for

students to start their MyLab assignments, ensuring that they are ready to work from the first day of class, as indicated on a voluntary, end-of-semester survey (93 percent response rate) in Fall 2016:

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

MyLab Introduction to Business 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. Huddleston'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. As the course instructor, her role is to assign content and homework in MyLab and provide remote support to students using the program at home.

Huddleston follows a Pearson MyLab best practice on the first day of class. She spends approximately 15 minutes reviewing a MyLab handout and walks students through the program, emphasizing the key aspects of the program. Many students are familiar with the MyLab from other courses, so she can keep the review to a minimum. Additionally, to ensure that all students are registered and on the class roster as soon as possible, Huddleston creates a practice MyLab assignment students complete immediately. She anticipates that students will spend at least one hour per week working in MyLab. Based on results of the end-of-semester survey, most students actually spent more time using MyLab than expected: 41 percent of students said they spent 1–2 hours per week working in MyLab, while an additional 34 percent of students said they spent more than two hours working in the program.

Lecture

Using MyLab Introduction to Business allows Huddleston to minimize traditional lecturing as students are now familiar with the chapter content after completing assignments. She can focus on the more challenging content and have students engage with it in class. More experiential work takes the place of lecture with PowerPoints and students may work in groups using the whiteboards or iPads on case analysis and other interactive activities.

MyLab Assignments

Students complete one homework assignment in MyLab each week, and Huddleston assigns both the video and simulation questions, as available, for a total of 17 assignments overall.

- **Decision Making Mini-Simulations:** Mini-Simulations put Huddleston's students in the role of manager as they make a series of decisions based on a realistic business challenge. The simulations change and branch based on their decisions, creating various scenario paths. At the end of each simulation, students receive a grade and a detailed report of the choices they made with the associated consequences included. Students have two attempts at completion.
- **Video assignments:** Videos explore a variety of business topics related to the theory students are learning in class and assess students' comprehension of the concepts covered in each video. Students have two attempts at completion.

- **Quizzes:** MyLab quizzes are optional, intended for additional practice, and are not part of the MyLab grade. Each quiz is comprised of 20-25 multiple-choice questions and students have three attempts at completion before checking their work. Quizzes are not timed.
- **Learning games:** students completed two or three interactive learning games per chapter, which helped them master the course concepts and gauge their performance through a series of levels. Huddleston notes that students enjoyed the games and asked that all games be opened for optional completion.

On the end-of-semester survey, students reported the following about MyLab assignments:

- 79 percent of respondents agreed that the simulation exercises helped them practice decision making and apply the chapter content to a real-world business challenge.
- 90 percent of respondents agreed that the video exercises helped them see the chapter contents in action.

Study Plan Pilot

The [Study Plan](#) uses adaptive learning technology to assess student performance and activity in real time and, using data and analytics, personalizes the content to reinforce concepts that target a student's personal strengths and weaknesses. The Study Plan is intended to make studying more efficient and effective for every student, and Huddleston and her colleagues hoped to learn how this specific MyLab feature might help their students' understanding of chapter content and ultimately, impact their assessment scores.

They chose to pilot the Study Plan with chapters 4 and 10 of the textbook in a semi-controlled environment, where half the students in each section were assigned the Study Plan for chapter 4 and the other half of the students were assigned the Study Plan for chapter 10. This ensured that all students would be assigned the Study Plan for at least one chapter. Upon completion of the Study Plan, students were given unannounced in-class quizzes to assess content understanding. All three instructors set the same parameters on the Study Plan and used the same quiz for both chapters.

Students participating in the end-of-semester survey shared the following:

- 96 percent of students agreed that use of the Study Plan helped them identify the chapter concepts that they needed to review and focus on.
- 89 percent of students agreed that use of the Study Plan positively impacted their quiz and exam scores.
- 85 percent of students agreed that it would have been helpful to have the Study Plan assigned for all chapters covered.

Additionally, the following comments about the Study Plan were included on the fall survey:

- *"The Study Plan helped ingrain the concepts and vocabulary more effectively than just reading the textbook."*
- *"By identifying the different concepts from the chapter and how they were used and applied in real life really helped me prepare for the exam."*
- *"The Study Plan helped me understand the material a lot more and broke it down for me."*

Course Assignments

Huddleston offers four paper-and-pencil exams comprised of 30–40 multiple-choice, true-false, and short answer essay questions. Approximately 60 percent of the questions are concept related and the remainder of the questions require application of the concepts. All exams are closed book and proctored. There are no make-up exams offered without the exception of a mandatory and documented obligation outside of class.

Students write in-class reflections on various articles throughout the semester, and prepare a brief in-class paper/reflection on the topics covered at the end of the semester. Additionally, students work individually on a career project entitled 'Discover Your Future'.

Assessments

- 40% Midterm exams (4)
- 24% MyLab homework assignments (video exercises and simulations)
- 16% In-class quizzes
- 10% Career project
- 10% Reflections and Reflection paper

Results and Data

Students were divided into two groups based on their use of the MyLab Study Plan for chapters 4 and 10 only. Figures 1 and 2 show that across all three sections of the course offered Fall 2016, students completing the Study Plan earned substantially higher average in-class quiz scores for that specific chapter only.

- For chapter 4, students who completed the Study Plan for chapter 4 ($n=46$) earned average in-class quiz scores 19 percentage points higher than students who did not complete the Study Plan ($n=64$).
- For chapter 10, students who completed the Study Plan for chapter 10 ($n=29$) earned average in-class quiz scores 11 percentage points higher than students who did not complete the Study Plan ($n=68$).
- 42 percent of students completed the Study Plan for chapter 4
- 30 percent of students completed the Study Plan for chapter 10

Huddleston reports there were some students who did not complete either Study Plan, and it was also noted that some students did only what was necessary to earn the points for completing the Study Plan but may not have taken the time needed to process the material being covered. Each instructor teaches differently but the results were consistent across all classes – students did better when completing the Study Plan. One explanation discussed among the instructors was that students often don't read the textbook but requiring the Study Plan assured that they would need to process the chapter content before completing the assignment.

Relationship between Study Plan score and quiz score, chapter 4

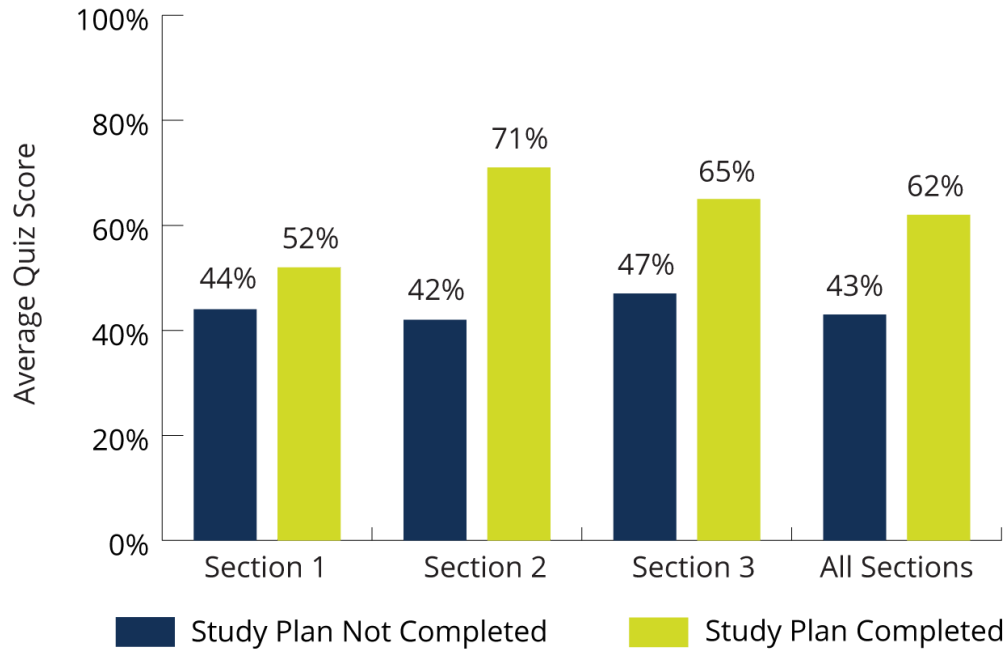


Figure 1. Relationship between Study Plan Completion and Average In-Class Quiz Score, Chapter 4 Only, Fall 2016 (n=100)

Relationship between Study Plan score and quiz score, chapter 10

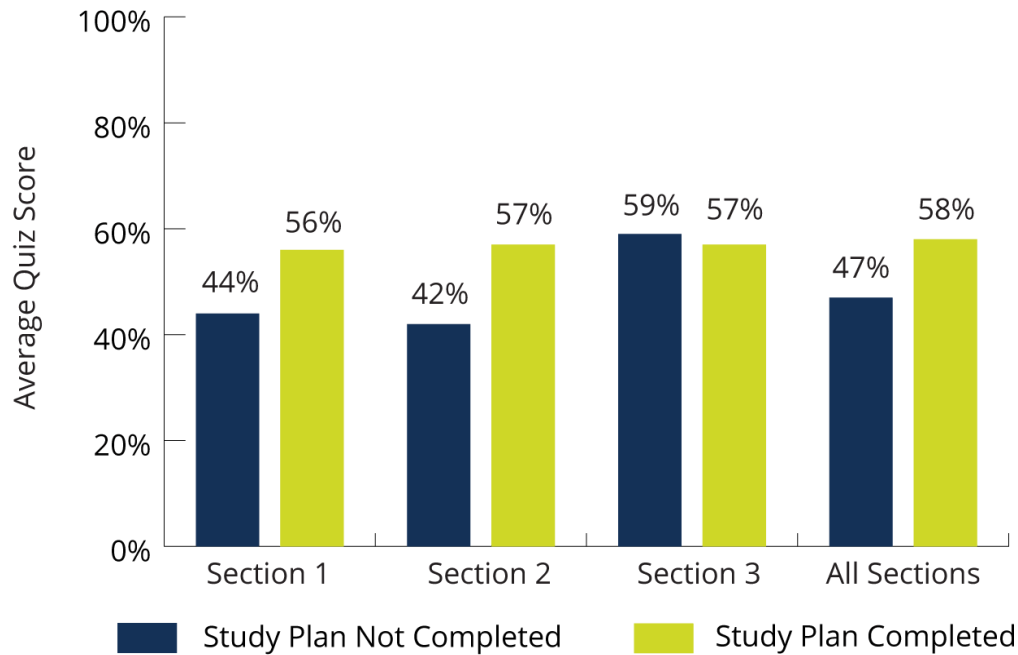


Figure 2. Relationship between Study Plan Completion and Average In-Class Quiz Score, Chapter 10 Only, Fall 2016 (n=97)

For Huddleston's sections only, additional MyLab analysis was completed (figures 3 and 4).

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 MyLab simulation scores and MyLab video assignment scores, where $r=.61$ and $p<.05$ (figure 4).

The correlation of average MyLab homework score to average exam score was moderate, where $r=.32$, which may be due to the difference in format between quizzes, which are multiple-choice only, and exams, which are a combination of multiple-choice and short answer. While additional research is needed to develop and test this concept further, Huddleston empirically asserts that students who truly invest effort into the MyLab assignments realize a positive impact. She sees this encouraging effect in particular when her students use examples from the MyLab videos or simulations assignments in their short answer exam questions.

Her students also agree based on this end-of-semester survey response:

- 86 percent of students strongly agree or agree that use of MyLab Introduction to Business positively impacted their exam scores.

Correlation between simulation score and video assignment score

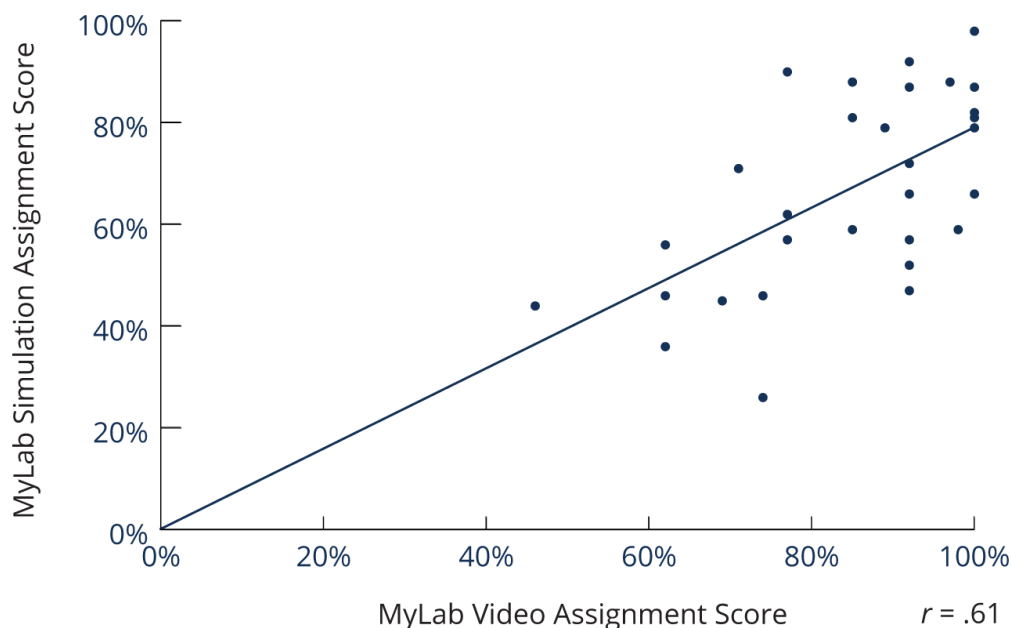


Figure 3. Correlation between Average MyLab Simulation Score and Average MyLab Video Assignment Score, Fall 2016 ($n=30$)

Additionally, MyLab homework completion was analyzed. Students were divided into two groups based on the average number of total MyLab assignments skipped. Students who completed more than the average number of assignments skipped earned higher average quiz and exam scores than students who skipped more than the average number of MyLab assignments (figure 4).

- Average MyLab assignments skipped: 3
- Students who skipped fewer than three MyLab assignments earned average quiz scores nine percentage points higher than students who skipped three or more assignments.
- Students who skipped fewer than three MyLab assignments earned average exam scores six percentage points higher than students who skipped three or more assignments.
- 50 percent of students skipped two or fewer MyLab assignments ($n=15$)

Relationship between MyLab assignment completion and quiz and exam scores

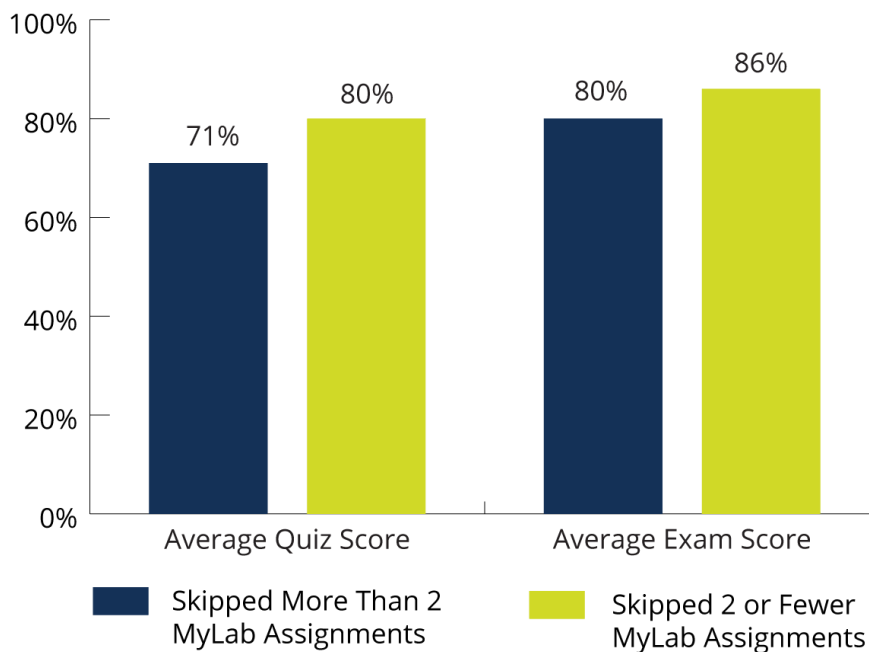


Figure 4. Relationship between MyLab Assignment Completion and Average Quiz and Average Exam Scores, Fall 2016 ($n=30$)

The Student Experience

Responses from the Fall 2016 end-of-semester, voluntary survey of Huddleston's students indicate that the majority of responding students recognize the value of MyLab Introduction to Business.

- 97 percent of students strongly agree or agree that their understanding of the course material increased as a result of using MyLab.
- 86 percent of students strongly agree or agree that the use of MyLab positively impacted their quiz and exam scores.
- 96 percent of students strongly agree or agree that they would recommend MyLab to another student.

Student survey responses to the question, "What did you like most about MyLab?" include:

- *"MyLab feels more in-depth than just reviewing powerpoint slides on Blackboard. Much more effective for studying."*
- *"I really liked the online form of learning and the quizzes and study plans offered to students."*
- *"The study plan helped me prepare adequately for every exam I took."*
- *"It has all the content in front of you and makes learning easier."*

Conclusion

As Huddleston reports, using MyLab Introduction to Business allowed her to minimize traditional lecturing as students are now familiar with the chapter content after completing assignments. She was able to focus on the more challenging content and have students engage with it in class. More experiential work takes the place of lecturing with PowerPoints and students work in groups on case analysis and other interactive activities. As part of the MyLab assignments, the Study Plan pilot provided a further opportunity for students to engage with the course material outside of class, leading to learning gains validated by course assessments. Data show that students who completed the Study Plan did indeed earn substantially higher quiz scores than students who did not complete the Study Plan.

Important advice from Huddleston for new users is to create a practice assignment the first day of school that engages students immediately with the MyLab and requires them to register. This allows the instructor to confirm that all students have the appropriate MyLab materials needed to be successful in the course.

The three instructors at Harford CC are currently discussing plans to assign the Study Plan for every chapter in Fall 2017. This will allow them to compare the results of Fall 2016 and Fall 2017 to see if exam scores and overall grades are impacted by required use of the Study Plan.