

MyLab IT educator study explores impact of homework performance and completion at Appalachian State University

Key Findings

- Students who scored above average on MyLab IT lab assignments had an average Capstone Grader Project score 16 percentage points higher and average exam score 14 percentage points higher than students who scored below average on MyLab IT lab assignments.
- 77% of students completed all eight Key Terms Matching assignments, and those who did had an average end-of-chapter quiz score 22 percentage points higher than students who skipped 1 or more Key Terms Matching homework assignments.
- Students are encouraged to achieve a score of 90% or higher on Capstone Grader Projects in order to earn a MyLab IT badge. On an end-of-semester survey, 76% of respondents agreed that, "MyLab IT badges give me an advantage when applying to jobs."

Study Specifics

School: Appalachian State University, Boone, NC
Course: Essential Business Tools and Technologies
Course format: Face to face (computer lab)
Course materials: MyLab IT with *Exploring Microsoft Office 2016* by Poatsy, Grauer, Mulbery, Krebs, Hogan, and Rutledge

Timeframe: Fall 2018
Educator: Regina Hartley, Lecturer in Computer Information Systems
Results reported by: Sara Kasper, Pearson Results Manager

Setting

[Appalachian State University](#), located in the Blue Ridge mountains of North Carolina, is [accredited](#) by the Commission on Colleges of the Southern Association of Colleges and Schools to award baccalaureate, master's, intermediate, and doctoral degrees.

- Enrollment in Fall 2018: 19,000+ students (91% undergraduate / 9% graduate)
- In-state students: 91%
- Ethnic diversity: 16%
- Degree programs offered: 150+

About the Course

Taught within the Department of Computer Information Systems and Supply Chain Management, the course provides a basic understanding of current information technologies used in business and enhances the use of the most common computer-based applications for personal, academic, and professional goals. Upon successful completion of this course, students should be able to use application software such as Microsoft Office to make better decisions and improve their individual skills. Other topics covered include the use of other information technologies including collaboration and communication tools, emerging technologies and digital media, and security. This course is designed for the user with little experience using computer software.

Class is held in a 55-seat computer lab. Regina Hartley is the faculty coordinator for the course and typically teaches three 16-week sections in Fall and Spring and one five-week summer session. Hartley creates a

[coordinator course](#) within MyLab IT and copies out member sections for other instructors to use, bringing consistency to the course across sections.

Challenges and Goals

Hartley started teaching the course in 2016. Previously it had been taught using only a textbook, and students learned computer concepts by watching videos. Hartley knew that the course desperately needed a hands-on component. "The more time students can spend doing hands-on learning, the better," she felt. Professors in the business school had also shared that students were not equipped with the Excel skills they needed to succeed in upper-level business courses, and this was further motivation to make a change and bring in a new digital solution to the course. Hartley's Pearson rep gave a demo of MyLab™ IT to the department, and the faculty was impressed with its ability to offer students the hands-on training they needed. The program was adopted in 2016.

This course is taken primarily by students admitted to the John A. Walker College of Business at Appalachian State University. When students apply to the business school, they must sit for a proficiency exam; if they fail, they must take this course. Hartley's goal is to make this course one that students want to take versus a course students are forced to take as she believes it helps students build important skills to be used in college and future careers. Although the course originally covered Word, PowerPoint, Excel, and Access, its focus is now primarily on Excel and Access, as these are the programs in which students need more instruction.

Implementation

Students spend much of class working hands-on in the computer lab. Hartley lectures periodically and spends the rest of class time circling the room, answering students' questions and walking them through steps. Since this is a beginner course, formulas and notes are provided. Appalachian State does not have an attendance policy, so to make coming to class as attractive as possible, Hartley gives students the opportunity to complete a majority of their work during class time. Weekly assignments are due Sunday at midnight; occasionally the deadline is extended if students need extra in-class guidance. Late assignments are not accepted unless a student has a university-excused absence.

Course assessments include the following:

End-of-chapter [Key Terms Matching exercises](#) require students to match key terms to their definitions. Hartley assigns these to incentivize students to read the text. Exercises from four Excel chapters and four Access chapters are assigned as homework.

End-of-chapter quizzes from the text mirror the chapters covered for homework. Students have three attempts and the highest score is recorded in the gradebook.

Lab assignments consist of [Simulation Trainings](#) with learning aids, followed by a [Simulation Exam](#) (learning aids deactivated), followed by one [Grader Project](#) per chapter. Students have unlimited attempts on simulations and three attempts on Grader Projects.

- On the end-of-semester survey, 79% of students rated the Simulation Trainings as very helpful. Said one student, *"I could not have passed without these trainings!"*
- When unable to start or complete a Simulation Training, 81% of student survey respondents reported always or often using the available learning aids for assistance.

- Said one student, *"I like the videos because if you do not know how to start or answer one of the questions you could always watch the videos and take notes on them."* Another student commented, *"If you don't understand something, then it helps you understand it until you get it right."*

Exams test students' understanding of the course content and their ability to apply core concepts. The midterm exam covers Excel Ch. 1–4 and the final exam covers Access Ch. 1–4. Exams are delivered through the college's LMS and consist of a MyLab IT Grader Project.

A **Business Capstone Grader Project** covers 12 chapters of content from the text. The purpose of the business project is to determine how well students can apply course concepts to a hypothetical business scenario. This project allows students to combine their growing expertise in using Microsoft Office with creative, research, and problem-solving skills.

Badging

Hartley encourages students to achieve a score of 90% or higher on Capstone Grader Projects in order to earn a [MyLab IT badge](#). A digital badge is an online representation of a skill or achievement earned and students may post their Acclaim badge on LinkedIn, social media, or their resume. An earned badge also gives students a 30% discount to purchase an exam voucher for [Microsoft Office Specialist \(MOS\) certification](#). If students pass the MOS certification, Hartley exempts them from taking the final exam.

On the end-of-semester student survey:

- 76% of respondents agreed that, "MyLab IT badges give me an advantage when applying to jobs."
- 46% of respondents reported [claiming one or more earned badges](#); 60% of these students posted a badge on LinkedIn and 55% added a badge to their resume.

Student comments related to the benefits of badging included:

- *"It will look good when applying to internships this summer that require proficiency in Excel and other Microsoft software."*
- *"They show your proficiency in a computer program."*
- *"They give a sense of accomplishment."*

Assessments

- 20% MyLab IT lab assignments
- 20% Business Capstone Grader Project
- 15% End-of-chapter Key Terms Matching homework exercises (8)
- 15% End-of-chapter quizzes (8)
- 15% Midterm exam (Excel Ch. 1–4)
- 15% Final exam (Access Ch. 1–4)

Results and Data

Students were placed into two groups based on their MyLab IT lab score for Excel assignments (Ch. 1–7; 10) and for Access assignments (Ch. 1–5; 8). Each chapter included a Simulation Training, Simulation Exam, and Grader Project. The average score for Excel lab assignments was 82% and the average score for Access lab assignments was 80%. Figure 1 illustrates that:

- Students who scored above average (> 82%) on Excel lab assignments had an average exam score 12 percentage points higher than students who scored below average (<82%) on Excel lab assignments.

- Students who scored above average (> 80%) on Access lab assignments had an average exam score 17 percentage points higher than students who scored below average (< 80%) on Excel lab assignments.

Overall, students who scored above average (>81%) on all lab assignments had an average exam score (Excel exam + Access exam) 14 percentage points higher than students who scored below average (< 81%) on lab assignments (not shown in figure 1).

Average exam scores based on Excel and Access MyLab IT lab score

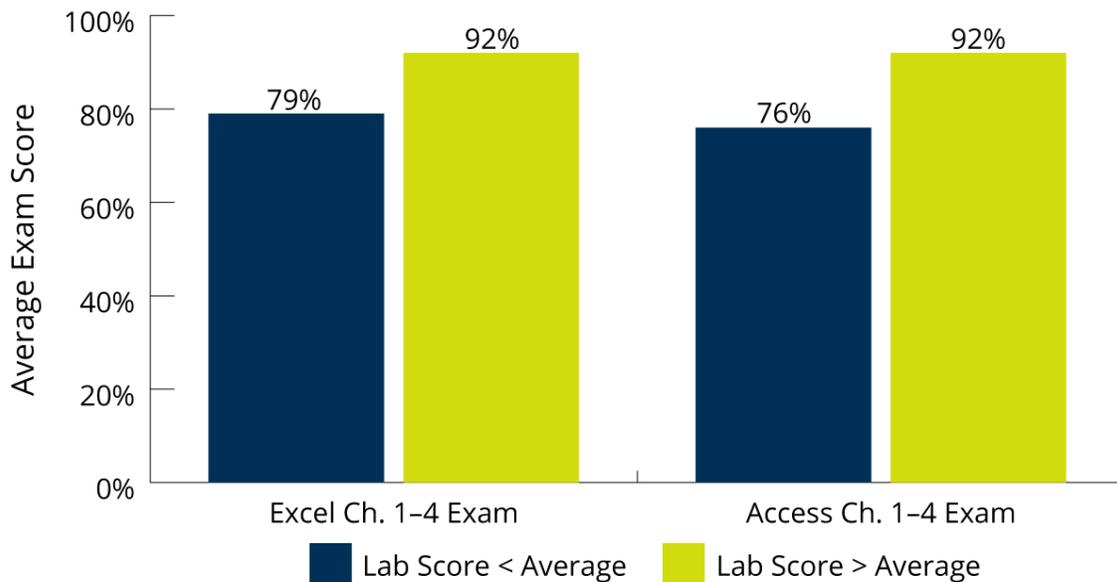


Figure 1. Excel Lab Score < Average (n=50); Excel Lab Score > Average (n=93); Access Lab Score < Average (n=76); Excel Lab Score > Average (n=92); Fall 2018 (N=143)

The impact of MyLab IT lab assignments on the average Business Capstone Grader Project score was also examined. Students were placed into two groups based on their overall MyLab IT lab score for 14 chapters. Figure 2 illustrates that:

- Students who scored above average (> 81%) on MyLab IT lab assignments had an average Capstone Grader Project score 16 percentage points higher than students who scored below average (< 81%) on MyLab IT lab assignments.

Average Business Capstone Grader Project score based on overall MyLab IT lab assignment score

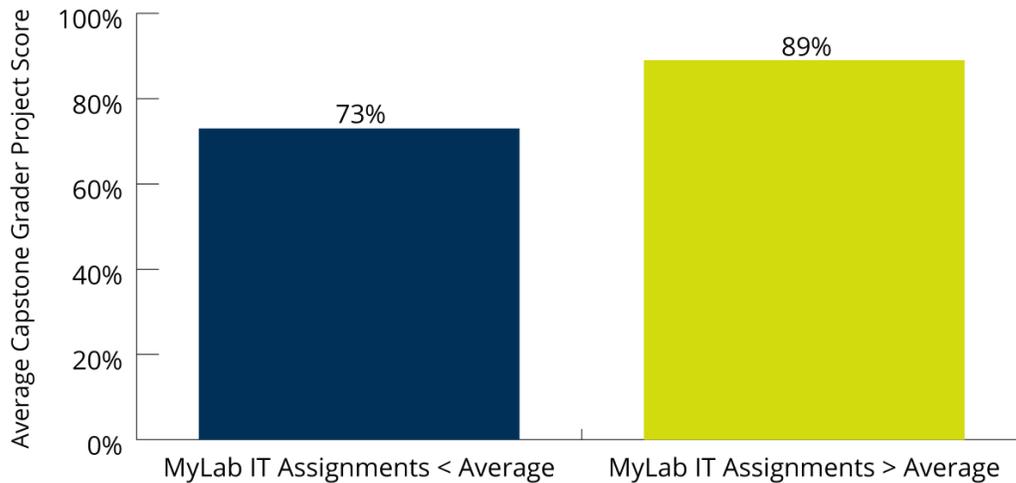


Figure 2. Average Business Capstone Grader Project Score Based on Overall MyLab IT Lab Assignment Score < Average ($n=46$) and > Average ($n=97$), Fall 2018 ($N=143$)

Finally, to explore the potential impact of Key Terms Matching exercises (assigned to encourage students to read the text) on end-of-chapter quiz scores (which test students' understanding of chapter content), students were divided into two groups: those who completed all eight Key Terms Matching homework assignments and those who skipped 1 or more. Encouragingly, 77% of students completed all eight Key Terms Matching assignments, and those who did had an average end-of-chapter quiz score 22 percentage points higher than students who skipped 1 or more Key Terms Matching homework assignments (figure 3).

Average end-of-chapter quiz score based on completion of Key Terms Matching assignments

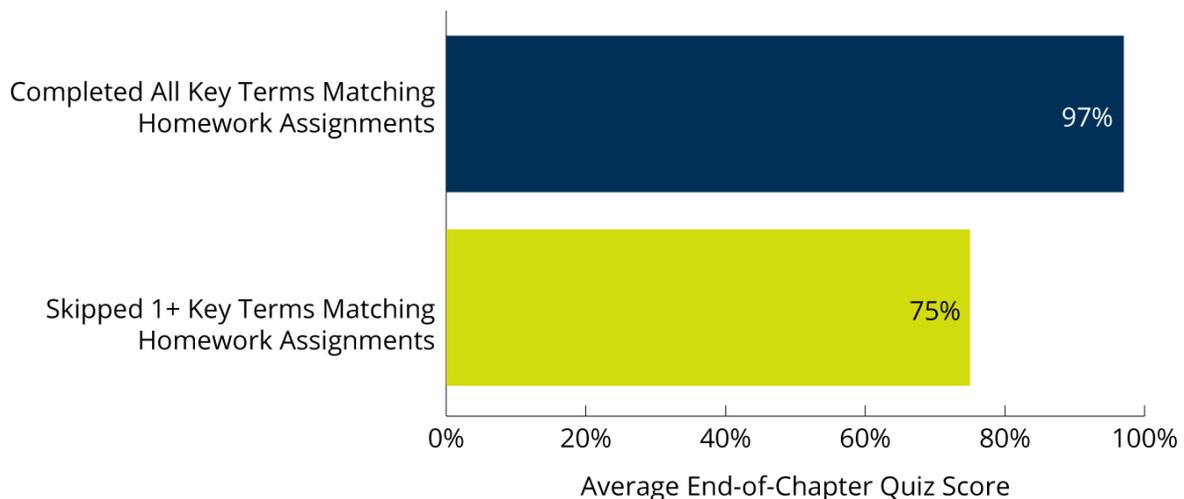


Figure 3. Average End-of-chapter Quiz Score for Students Who Completed All Key Terms Matching Assignments ($n=110$); Students Who Skipped 1+ Key Terms Matching Exercises ($n=33$); Fall 2018 ($N=143$)

The Student Experience

Responses from a Fall 2018 end-of-semester survey of Hartley's students (50% response rate) indicate that the majority of responding students recognize the value of MyLab IT.

- 98% of respondents agreed that, "My ability to successfully use Microsoft Office programs increased as a result of using MyLab IT."
- 86% of students would recommend MyLab IT to other students.
- 66% of respondents reporting using Excel or Access skills learned from MyLab IT in other college courses during the semester; 29% reporting using skills learned from MyLab IT at a job or internship.

Student survey responses to the question, "What are the benefits of MyLab IT?" included:

- *"[MyLab IT] allowed me to understand everything needed to understand and work Excel. It let me fix my mistakes, helping me learn the skills better."*
- *"Step-by-step instructions and on your own (you) work to practice"*
- *"The ease of completion and the repetitiveness of learning a skill. I also loved the videos of how to do the question (even though they were slow motion). Happy to have learned skills to use in my future career."*
- *"Very helpful in guiding the student to succeed."*

Student responses to the question, "What was the value of taking this course?" included:

- *"Gaining a proficiency in Excel contributes towards being hired and being successful in a job or internship."*
- *"This will help me a lot with my future coursework and at my job."*
- *"I have a stronger grasp of the uses of these applications."*
- *"I believe it will help me keep things more organized and portray a professional appearance when presenting my work."*
- *"I want to go into finance and I think that the skills I gained using Excel will help me out tremendously."*

Conclusion

MyLab IT has brought a hands-on component to the Essential Business Tools and Technologies course that is giving students the practice and the hands-on skills they will need to succeed in upper-level business courses. Students on the end-of-semester survey confirmed the value of incorporating a digital solution into a course that previously had none. Said one student, *"All of the skills and traits that I have learned throughout this course will be used probably for the rest of my life. I am a finance major so I will be using Excel pretty much everyday during my career."* Another student shared, *"I'm an accounting major so this will be extremely helpful in my career, considering Excel is one of the main components."*

Hartley is interested in becoming a certified [Certiport](#) testing center so that students may sit for the [Microsoft Office Specialist \(MOS\) certification exam](#) on campus. Hartley and her colleagues see value in the certification for students, and it seems as though students do as well. On the end-of-semester student survey, 76% of respondents said they were interested or potentially interested in taking the certification exam. Down the line, there is a vision for the MOS exam to take the place of the final exam in the course.