MyLab IT educator study examines demonstration of Excel proficiency at University of Wisconsin–Milwaukee

Key Findings

- MyLab IT was included as a key component of an Accounting Information Systems course to help students demonstrate proficiency in Excel.
- MyLab IT allowed the instructor to consistently assess student competency in Excel with little effort or additional time.
- Acclaim badges were received by 95% of students on two Capstone Grader Projects in MyLab IT, allowing students to show current and potential employers their mastery of specific skills.

Study Specifics

School name: University of Wisconsin–Milwaukee, Milwaukee, WI
Course name: Accounting Information Systems
Course format: Face-to-face / hybrid
Course materials: MyLab IT; *GO! Excel* by Gaskin, Vargas, and Geoghan

Timeframe: Spring 2016
Educator: Colleen Boland, Assistant Professor
Results reported by: Sara Kasper, Pearson Results Manager

Setting

The University of Wisconsin–Milwaukee (UWM), Wisconsin's only public urban research university, offers 94 bachelor's degree programs, 64 master's degree programs, and 33 doctoral degree programs. In the 2015–2016 school year, over 27,000 students were served.

- 82% undergraduate; 18% graduate
- 84% in-state residents
- 33% of freshmen are students of color
- 39% of undergraduate students enrolling are first-generation college students

About the Course

This three-credit, 15-week course, taught through the accounting department, is an introduction to accounting information systems and related technology, including principles of accounting systems design, internal controls in an automated environment, and coverage of commercial accounting software packages. Students taking this course are mostly junior and senior accounting majors as well as graduate students with a non-accounting undergraduate degree. Students are expected to spend six hours of class preparation weekly.

Professor Boland has been teaching for the past eight years, the last two years at UWM. Spring 2016 was the first semester Boland used MyLab IT. In Spring 2016, she taught the only two sections offered of this course (73 students). One section met once a week at night, and the other section met twice a week during the day. She notes the student population was comparable. Two sections will be offered in Fall 2016. The course is taught face to face, but will be designated as a hybrid course starting in Fall 2016. With the hybrid designation, students will have less face-to-face class time to balance the amount of work they will complete online in MyLab IT.

Challenges and Goals

Professor Boland notes that most of the students taking this course will participate in an accounting internship or go into public accounting. Many also work part-time accounting jobs in the field while they are taking the course. Often students believe they are already proficient in Excel when they are not. Competency with Excel is important for Professor Boland's students. She says, "Encouraged by our students' employers, we wanted to be able to easily assess and prove students' competency using Excel. MyLab IT is the perfect solution to this challenge, as it allows us to give students grades for Excel-based assignments, without causing extra work for the instructor. Students can prove their proficiency through badges, post them on social media and their resumes, and may also elect to take the Excel Basic certification exam."

Implementation

All sections are enrolled in the same MyLab IT course with the same due dates, required homework, and assessments. MyLab IT assignments run parallel to the class, but there is little to no integration with class work. For example, Excel-based questions are not included on the midterm or final exam. As such, MyLab IT work exists as a self-contained part of the course.

MyLab IT work is completed outside of class time, either on students' personal computers or in a computer lab on campus. MyLab IT homework is due weekly over 10 weeks of a 15-week semester. Attempts are unlimited for homework, and students have three tries for each of their two Capstone Grader Projects. If a MyLab IT assignment is skipped, students will receive a zero grade. According to an end-of-semester survey (33% response rate), 54% of students reported spending one to two hours a week on MyLab IT, 33% of students spent two to three hours, and 12% spent more than three hours a week on MyLab IT.

A best practice tip from Professor Boland: "The MyLab IT assessments can sometimes be a little limited as to what series of keystrokes are considered a successful accomplishment or demonstration of a task in Excel. I stress to students to faithfully follow the *GO! Excel* demonstrations as the surest way to receive a 'correct' answer, rather than performing a short cut."

About Capstone Grader Projects and Badging in MyLab IT
Capstone Grader Projects require the skills presented in an entire textbook volume—about three chapters. These projects are typically assigned as end-of-unit activities or cumulative assessments. Capstone Grader Projects in MyLab IT are completed offline in Excel, then uploaded to MyLab IT for scoring. If a score of 90% or higher is achieved on a Capstone Grader Project, students will earn a MyLab IT badge. A badge is an online representation of a skill or achievement earned and designed to motivate behavior, recognize achievement, and establish credibility. Students can share their badge on social media as well as online portfolios and resumes. 43% of students responding to an end-of-semester survey reported they received a MyLab IT badge and posted it on LinkedIn, Facebook, or Twitter; 13% posted a badge on their resume; and only 9% were unaware of this option.

Instead of simply claiming familiarity with Microsoft Office applications, badges provide verified evidence that learners have demonstrated specific skills and competencies using Microsoft Office. Learn more about badging.

Assessments

- 20% Final exam (comprehensive)
- 15% Midterm exam
- 15% MyLab IT Excel Capstone Grader Projects (2)
- 25% Quizzes in D2L* (9), class activities and preparation

- 25% Homework (7 MyLab IT; 7 Visio flow-charting/writing activities)
- 4% Extra credit: Excel Basic Certification exam

*D2L is the Learning Management System at University of Wisconsin—Milwaukee

Results and Data

This past semester, 96% of students passed the first Capstone Grader Project in MyLab IT, and 95% passed the second project (figure 1). Two students did not attempt each of the Capstones. If these students are removed, the percent of students receiving a badge increases to 99% for the first project and 97% for the second.

- The average score on the first Capstone Grader Project was 97.5% and the average score on the second was 96.7%. This average does not include the zeros received by the two students who skipped each Capstone.
- On an end-of-semester survey (response rate 33%), 42% of students attempted the first Capstone more than once, and 71% attempted the second Capstone two or three times (figure 2).

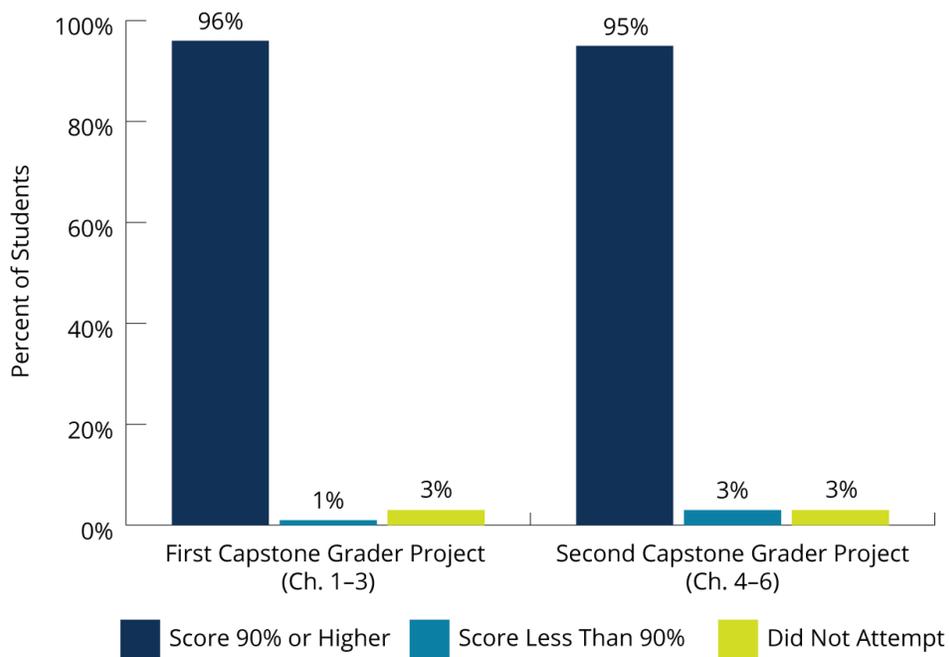**Student achievement on Capstone Grader projects**

Figure 1. Percent of Students Who Scored 90% or Higher, Less Than 90%, Or Did Not Attempt Capstone Grader Projects, Spring 2016 (*n*=73)

Percent of students attempting Capstone Grader Projects
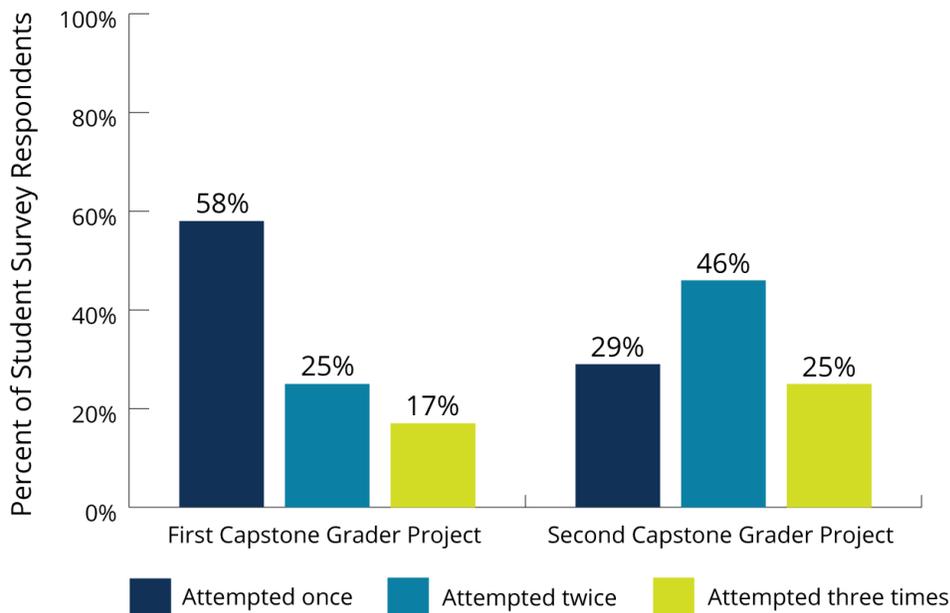

Figure 2. Percent of Student Survey Respondents Who Made One, Two, or Three Attempts On First and Second Capstone Grader Projects (*n*=24)

A passing score on the Excel Basic Certification exam is 75% or higher. It costs $90 to take, although earning a MyLab IT badge entitles students to purchase a certification exam voucher at a 50% discount. While Boland knows that almost half (47%) of her students took the certification exam, there may have been students who took the exam but did not report their results. Of the 34 students who reported their results, 31 passed and received extra credit, and three students did not pass. (Professor Boland requests a hard copy of the certificate or has students email it to her as a PDF.) The fact that at least half of her class sat for the exam indicates to Boland that students value the certification. In the Fall, she hopes to include the certification exam on campus on specified dates.

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 <.01 shows the existence of a correlation between these two variables.

- A positive correlation exists between average MyLab IT homework scores and the average of two Capstone Grader Projects, where *r*=.50 and *p*<.01. Three students were removed as outliers because they did not attempt one of the Projects.

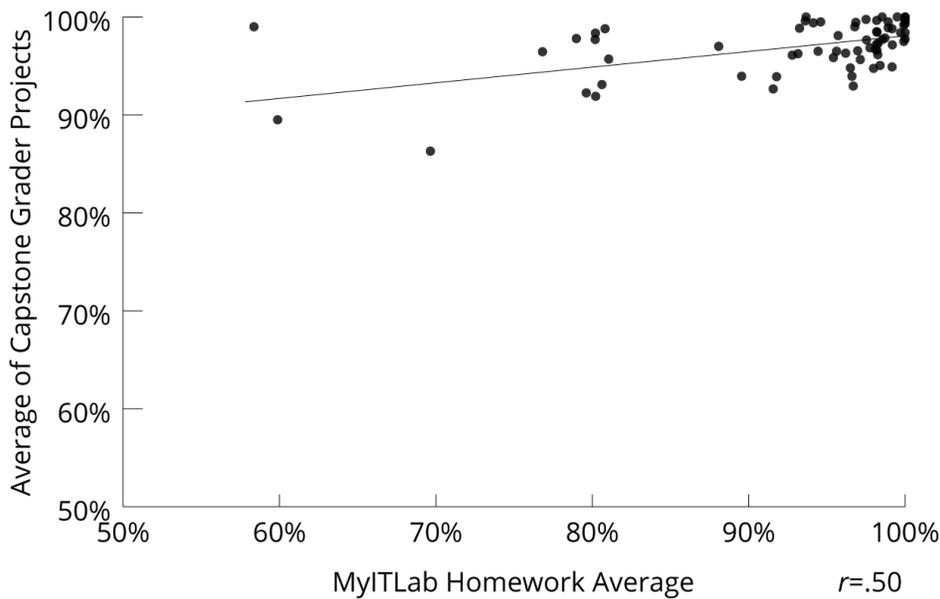**Correlation of MyLab IT homework average to average of Capstone Grader Projects**

Figure 3. Correlation of MyLab IT Homework Average to Average of Capstone Grader Projects (*n*=70)

The Student Experience

> "A dozen of my students said, 'I used what I learned in MyLab IT at my job today.' Students feel like they're shining at work because they have the skills they need to succeed."
> —Professor Colleen Boland, University of Wisconsin–Milwaukee

This semester, Professor Boland shares, "I did not receive any complaints from students calling MyLab IT 'busy work'—in fact, I heard quite the opposite. A dozen of my students said, 'I used what I learned in MyLab IT at my job today.' Students feel like they're shining at work because they have the skills they need to succeed. It's been a huge boost. I even have past students coming back and requesting to use MyLab IT because they want to improve their skills."

A student survey was deployed at the end of the Spring 2016 semester, with 24 students responding (33% response rate).

- 96% of students agreed that, "I would recommend MyLab IT to other students taking this course."
- 96% of students agreed that, "My knowledge of Excel and ability to successfully use Excel increased as a result of using MyLab IT."
- 75% of students reported that they were able to use Excel skills learned from MyLab IT in real-life situations such as a job, internship, personal finance, etc. during the course of the semester.
- 43% of students reported they received a MyLab IT badge and posted it on LinkedIn, Facebook, or Twitter; 13% posted a badge on their resume. Only 9% were unaware of this option.

What did you like most about MyLab IT?

- *"I liked that the basics of Excel were taught very well through the program. Using the simulations really helped me a lot in completing the homework and Capstone assignments."*
- *"Very intuitive instructions."*

- *"Gives students the chance to be familiar with plenty of Excel functions, which can be applicable in real-life situations."*
- *"Having the learning aids to walk through how to do something on Excel."*

What do you think about badges? Do they give you an advantage in the job market?
- *"I think it is proof that I have had higher training on Excel, and it will give them confidence on my expertise."*
- *"Great resume builder."*
- *"It depends on how you talk about it and how you apply it in your interview."*
- *"I don't know if employers know what they are."*

Conclusion

Professor Boland believes it is important for students to be able to use Excel as a tool to be successful in accounting. She notes, "MyLab IT work has been a significant add to the course syllabus, and *GO! Excel* allowed this increase with nearly no extra work on my part." She shares an added benefit: "One of the by-products of using MyLab IT is that it helps students develop skills in learning new technology. Developing technology independence is an objective at UWM, and MyLab IT provides an opportunity to learn and navigate a new system."