Challenges
Elon University is a private university with a diverse student body of more than 6,000 students from 47 states and 49 countries. Advanced Applications of Excel for Business is taken mainly by business students seeking to further their Microsoft Excel knowledge for use in future finance and statistics courses. The course exposes students to the advanced capabilities of Excel, including statistical analysis, financial analysis and modeling, macros, charts, and graphs.

Maureen Allen, instructor, was first exposed to MyITLab at another school. After witnessing the value of providing students with hands-on practice in live software, she implemented the program into her courses at Elon. An added benefit is that Elon’s professors no longer manually grade assignments and exams—because MyITLab allows for more options when completing application steps, grading is more consistent and there are fewer student disagreements about grades.

Implementation
MyITLab is a required part of the course. Before the first day of class, Allen loads all assignments and assessment due dates into the MyITLab calendar—because students can work ahead if necessary, no late work is accepted.

Classroom lectures directly correspond to MyITLab Skill-Based Trainings. Students download the files and work on them while Allen lectures. Allen strongly encourages students to complete Trainings before lectures, as those who do demonstrate greater understanding of the lectures. Students may review the Trainings on their own time for additional review after lecture.

MyITLab Training Simulations, Grader Projects, and quizzes are assigned as homework. Students are allowed two attempts on each homework assignment, and the average of both attempts is recorded as the assignment grade. If both attempts are completed before lecture, the better of the two grades rather than the average is recorded. Grader Projects are also used as weekly exams.

Within each chapter, assignments and assessments follow a set pattern of practice/remediation/assessment:

- Skill Based Training I
- Skill Based Training II
- Skill Based Exams
- End of Chapter Quiz
- Grader Project Homework I
- Grader Project Homework II
- Grader Project Assessment I
- Grader Project Assessment II

Allen assigns projects outside of MyITLab on topics such as expenses, POs, and revenue to offer students an opportunity to apply what they’ve learned in MyITLab to a real-world setting.

Assessments
20 percent   MyITLab Skill-Based Exams
15 percent   MyITLab Skill-Based Trainings
15 percent   MyITLab Grader Project homework
15 percent   MyITLab Grader Project assessment
15 percent   Projects outside of MyITLab
10 percent   MyITLab end-of-chapter quizzes
10 percent   MyITLab final exam

Key Results
Use of MyITLab led to sustainable mastery of course content. Data show a significant correlation between MyITLab homework scores and average exam scores, plus a 100 percent pass rate for students taking the MOS Certification Exam for Excel 2010.
Results and Data

To measure the impact of MyITLab on student learning, the correlation between assignments and assessment activities in MyITLab was assessed. The results show a positive correlation between average MyITLab Training grades to exam scores—this is compelling as these exams immediately follow completion of Training Simulations (figure 1). Data also show a significant, positive correlation between MyITLab Grader Project homework scores and Grader Project assessment scores (figure 2).

Additional positive correlations (not depicted) provide further confirmation of the relationship between success in MyITLab assignments and follow-up assessments:

- MyITLab Skill-Based Trainings and MyITLab quizzes
- MyITLab Skill-Based exams and MyITLab final exams

Data show that students who earned >90 percent on Trainings earned average exam scores of 89 percent; students who earned <90% on Trainings scored an average of 76 percent on exams (figure 3).

In addition, Allen has a 100 percent passing rate for students who took the MOS Excel exam after successfully completing this course and reviewing the practice exams (fall 2013–spring 2014, n=12).

The Student Experience

Students appreciate the variety of learning aids and resources that MyITLab offers, including its training videos and presentations that particularly help students who are inexperienced with Excel’s more advanced features. Grader Projects help students assess their understanding of course concepts in real-world case studies, and the program’s immediate feedback enables students to identify weaknesses and successfully remediate.

Conclusion

Use of MyITLab has resulted in positive, measureable changes in Allen’s course: in addition to increased student comprehension of course content and a best-ever pass rate for the MOS Excel exam, Allen has more time to target her lectures and spend time one-on-one with the students who need it.