Carroll Community College is an open-admissions community college offering baccalaureate preparation, career, and workforce and business development programs. Introduction to Computer Information Systems, which is taken by most students at the college, provides hands-on experience via individual and team-based projects on Internet applications. Upon successful completion of the course, students can demonstrate the value and usefulness of digital literacy in a technological society and workforce.

Margo Chaney, program coordinator, was unsatisfied with the school’s previous online training and assessment courseware and replaced it with MyITLab in fall 2009. She cites several benefits, including a simulated environment that uses the projects, skills, and methods covered in the text; the program’s self-paced nature; and adaptive learning features that mean students needn’t retrain on skills they already know.

Implementation

MyITLab is a required component of the course and is used for both concept and application work. Chaney’s initial implementation included only the MyITLab Training assignments and Post-Tests. In spring 2011, she added MyITLab Pre-Tests as required homework. Today, her course set-up is as follows:

Concepts

MyITLab homework Labs (HelpDesks/Sound Bytes) are assigned to support concepts from the textbook. In-class reading quizzes help students stay on track and self-assess their understanding of chapter content and lab concepts. In-class exams measure mastery of the textbook concepts.

Microsoft Office applications

To evaluate current skill levels, students complete in-class MyITLab Pre-Tests for Windows, Word, and PowerPoint. From this, MyITLab creates a personalized Training focused only on those skills that need remediation. Trainings and Labs assist students in learning the skills they’ll need to complete Grader Projects and Post-Tests. Those students who earn at least 90 percent on the Pre-Tests may skip the Trainings or proceed with the Trainings to earn a higher grade. For the Excel and Access applications, students complete Pre-Tests and Trainings as homework before the first day the application is covered; there is no option to test out.

Microsoft Office application Labs (three per application) are completed after students complete the Trainings and instruction is provided in class. Labs, designed to help students learn and practice skills, are uploaded to and graded in MyITLab. Students may submit them an unlimited amount of times in order to earn a score of at least 80 percent and gain 5 points. In addition, students complete projects for each application, and take Microsoft Concept quizzes to assess their understanding of the concepts associated with each application.

The comprehensive final exam covers Windows 7, Internet, Word, Excel, Access, and PowerPoint; and consists of an integrated project based on the skills learned throughout the semester.

Assessments

30.0 percent Quizzes, Labs, Tech in Action
20.5 percent MyITLab Pre-Tests, Trainings, and Post-Tests
17.5 percent Final exam
17.0 percent MyITLab integrated Grader Projects
6.0 percent MyITLab Grader Projects
5.0 percent Concept quizzes
4.0 percent Participation, service learning activity
Results and Data
Chaney sought data-supported evidence of MyITLab’s general efficacy, as well as the impact of its pretest assignments and resulting personalized Trainings. To that end, she conducted an analysis of mean application scores from spring 2011 through 2013. Data indicated overall score improvement after completion of MyITLab Pre-Tests and personalized Trainings (figure 1).

In addition, analysis of Pre-Test-to-Post-Test scores for all applications indicated that students who resubmit Trainings until they earn at least 90 points, achieve significantly higher Post-Test scores than students who do not resubmit Trainings (and earn less than 90 points). Figure 2 shows the data for Microsoft Word Pre-Test and Post-Test scores.

The Student Experience
Chaney’s students benefit from the student-centered Trainings in MyITLab—the immediate, personalized feedback answers their questions in the moment that they are struggling, and the program’s self-paced format enables student to complete their work on their own schedule.

Conclusion
MyITLab’s outcome-based Trainings, with their learning aids, including Practice [hints] and Watch [multimedia demonstrations] features, help Chaney’s students achieve higher mean application scores. And the adaptive feedback from pretests creates Trainings that help them remediate specific areas of weakness.

In addition, automatic tracking within the Grader projects has resulted in a decrease in integrity violations—students know that if they submit another student’s work, instructors will know.

Lastly, Chaney reports that MyITLab helps her be a better instructor. The Gradebook enables her to quickly and easily review Training scores to identify those concepts causing students trouble and adjust lectures accordingly. And because MyITLab automatically grades assignments, she can assign more homework than when it was hand graded. As a result, students have more opportunities to learn and are better prepared for assessments.