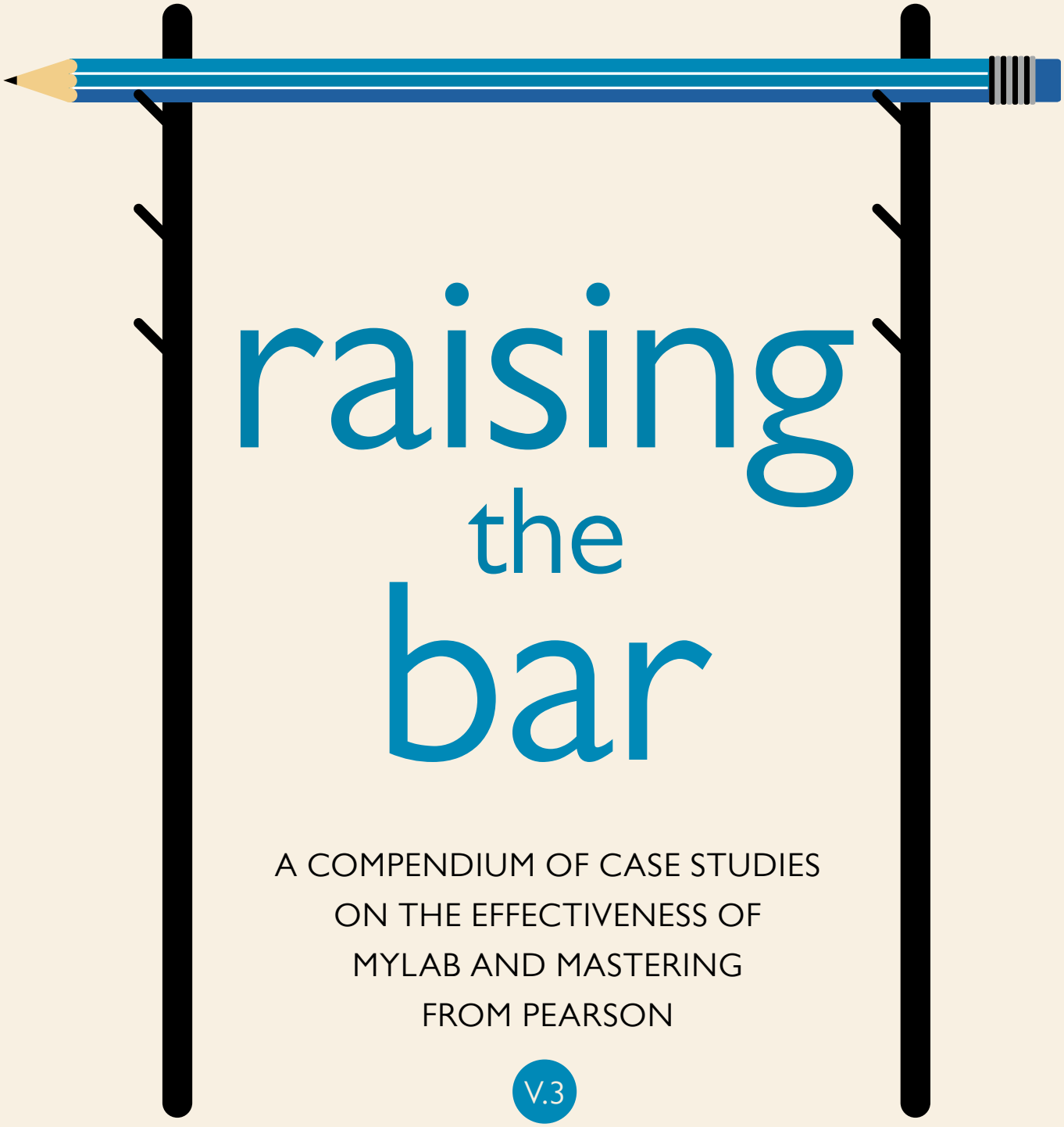
Improving results | Engaging experiences | Experienced partner



raising the bar

A COMPENDIUM OF CASE STUDIES ON THE EFFECTIVENESS OF MYLAB AND MASTERING FROM PEARSON

V.3

What are instructors saying?

MasteringBiology®

" I began using Mastering as an optional extension for students to utilize outside of class. The most common feedback that I received was "'Make Mastering mandatory!'"

—Professor Rebecca Orr,
Collin College (TX), page 7

MyWritingLab®

" My students frequently would tell me how easy MyWritingLab was to use and how much they learned from it. I could definitely see an improvement in the first three weeks of them working in MyWritingLab."

—Professor in the Business Department,
California State University-Bakersfield (CA),
page 33

MySpanishLab®

"MySpanishLab has made for a noticeably higher level of communicative ability among my students."

—Dr. Lunden E. MacDonald,
Metropolitan State University (CO),
page 28

MyMathLab®

" Perhaps most important, students that were initially unsuccessful are returning to complete the courses at more than twice the original rate. It's incredibly fulfilling to see."

—Professor Judy Roane,
Pearl River Community College (MS), page 25

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CASE STUDIES

Making a positive impact on student success

MyLab and Mastering from Pearson are designed with a single purpose in mind: to improve the academic success of all higher education students, one student at a time. By leveraging data-driven insights made possible from ten-million student users, MyLab and Mastering deliver engaging, dynamic learning experiences based on content proven to help students absorb course material and understand difficult concepts. Each product is focused on your course objectives and responsive to each student's progress. And because MyLab and Mastering come from Pearson, you can be confident you have an experienced partner committed to your and your students' success …every step of the way.

Improving results

This report presents compelling evidence from 15 case studies, showing how MyLab and Mastering increase student learning and achievement.

- Successfully used by nearly 10 million students each year
- Positively impacted the quality of learning in higher education instruction in math, science, engineering, humanities, social sciences, world languages and business disciplines
- Designed for your specific subject with the input of academic experts, textbook creators, faculty, and students
- Refined from data-driven insights derived from over a decade of real-world use by faculty and students
- Can be successfully implemented in any environment—lab-based, hybrid, fully online/distance learning, traditional

Engaging experiences

MyLab and Mastering provide dynamic, engaging experiences that personalize and activate learning for each student.

- Consists of over 80 robust and accessible online products
- Lets students assess their understanding with Diagnostic tests or quizzes and receive a personalized study plan—or even a personalized homework assignment—providing interactive tutorial exercises for topics the student hasn't yet mastered
- Gives students unlimited opportunity for practice and mastery through its exercises that regenerate algorithmically
- Supports an active learning cycle – engage, assess, advance – for each student and each topic throughout the course
- Acts as a powerful, time-saving aid to educators from course preparation to delivery and assessment

.

Experienced partner

Pearson is a leader committed to education, providing the content, resources, and expertise for the best digital learning tools—now and into the future.

- Partnering in education—we're here to help, from customizing to sign-up to enhancements
- Offering a huge library of options created by the most respected academic sources so you can choose the content that is best suited to your course
- Building communication and collaboration among faculty and students

Partner with Pearson

Learn firsthand how MyLab and Mastering can work for you and your students. Before making a commitment to adopt, find out how you can partner with Pearson on a case study or experimental study. Email Efficacy Research Program Manager Brian Buckley (brian.buckley@pearson.com) for more information.

MasteringAstronomy®

CASE STUDY

Course Name Astronomy 10: The Solar System
Astronomy 20: Stars & the Universe

Credit Hours 3 credit hours

Basic Course Information Both are 3-unit lecture/discussion courses, with a class size of about 50 students, held on campus 3 hours per week in a planetarium, or offered in a completely online fashion with no required meetings. Both astronomy courses have no prerequisites, qualify for general education credit in physical sciences, and are typically taken in the first or second semester of students' college experience. Astronomy is one of the top two classes taken at Chabot College by non-majors interested in transfer. About 20–25% of students in the course are also taking remedial courses in mathematics and English, and a similar population of students are ESL students. Reading skills for some students are significantly limited.

Submitted by Scott Hildreth, Chabot College, CA

Assessment

Students are graded on four elements: online homework, online reading quizzes for each chapter of the textbook, weekly participation discussion/research assignments, and two essay exams. The online homework and reading quizzes are administered with MasteringAstronomy and are required.

Implementation

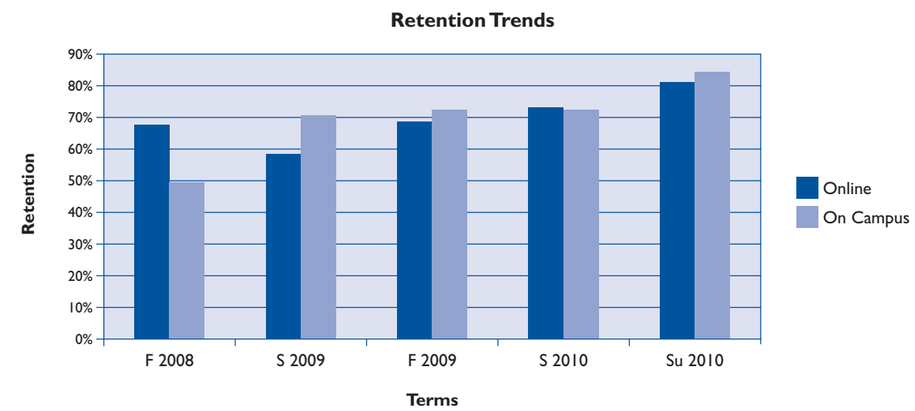
In Astronomy, online homework assignments incorporate a wide variety of resources available in MasteringAstronomy in an attempt to offer something for the diverse learning preferences of our students. Typical assignments are targeted for about 1 hour or less, based on MasteringAstronomy's average student time statistics, and include ranking tasks, visual quizzes, tutorial problems, and the animated tutorials. Assignments include five to eight questions, plus extra credit opportunities; the animated tutorials are typically allocated more credit as each takes between 10–15 minutes. I also include relevant media links in the assignments. Students are encouraged to suggest additional clips that they feel augment or enhance any of the assigned questions. Students are not penalized for opening hints in the skill-building and self-paced tutorial questions, and they are given multiple chances at correct answers for every question.

Online reading quizzes for each chapter of our book are created from the available test-bank questions and are offered with two chances at each question. Quizzes have 20–25 questions and are targeted to take 30–45 minutes. All Mastering assignments are available 24/7, and have relatively gentle late penalties to encourage students to learn even if they aren't able to complete the work by the deadlines. Gradebook statistics for homework assignments are used in two ways:

1. I review the results on the day the assignment is due, and problems that have been missed most often, and/or reveal common misconceptions, are then clarified in lecture. I show the statistics to the students (without names) to reinforce that many in a class often make similar mistakes.
2. I use the results to modify the questions—add hints, feedback, or clarifying messages using Mastering's editor—for assignment in subsequent semesters.

Results

Over 6 years of using MasteringAstronomy, I've increased both the length of online homework assignments and the breadth of questions selected for those assignments, in response to the students' comments that these resources help them learn. Students are definitely working harder, spending more time on the homework and on the quizzes in addition to the weekly discussion topics. Before MasteringAstronomy, I used class time for reading quizzes in the on-campus classes, had shorter homework assignments, and typically assigned animated tutorials on an "all or nothing" credit basis. Now, I have even more time for lecture and discussion, have the students doing even more work engaging in key concepts, and have a better sense of what they still don't understand through analysis of the statistics. My course completion rate (retention rate) in online classes is up about 10% over the last 4 years, and similarly has increased in the on-campus classes, as shown above.



Student Quotes

- "Again, fun! These interactive tutorials are very helpful."
- "The tutorials are interesting and I like doing them. I would rather do them than just read and study the book. They add another level to learning Astronomy and I think they are something that should continue to be used."
- "Explanations after solving each question are very useful!!"
- "The hints are very useful [to coach me] step-by-step [on] how to approach [problems] and help guide me to get the correct answer."

Conclusion

Students in both on-campus and online classes have shared for years that the animated tutorials tracked and scored in Mastering are the single most effective media resources they use in the class, and they have shared that they like those resources even more than lectures. Students cite that they routinely share the tutorials with friends and family members as they complete the weekly discussion assignments.

Students also shared that being able to have two tries at quiz-question answers has helped them focus on learning, removing much of the stress of a traditional on-campus quiz. Students clearly are spending time on the quizzes (averaging about 40–50 minutes based on Mastering's usage statistics), undoubtedly in open-book mode searching for answers.

A learning tool that students use and appreciate, engages them in science outside of the classroom, and provides me with one-click insight into their learning and misconceptions is a tool that I'll continue to use.

MasteringBiology®

CASE STUDY

Course Name Biology 1406

Credit Hours 4 credit hours

Basic Course Information This is a traditional, on-campus lecture with an on-campus lab.

Submitted by Rebecca Orr, Collin College, TX

Assessment

Exams are worth 80%, total of four exams plus a comprehensive final.

Mastering is worth 20% total: 10% from assigned homework, 10% from required quizzes taken within the Mastering platform.

Implementation

Mastering is a required component of the lecture. The course ID is posted on my class website, and homework is due by the end of the first week of class to encourage all students to get an account and join the course right away. I create a variety of assignments that include:

- Reading quizzes: These are quick, 10-question quizzes designed to give students quick feedback regarding their initial comprehension of the material.
- Homework assignments: These are comprised of tutorials, activities, BioFlix™, and misconception questions, and are chapter-specific. Each homework assignment will require a student to spend 1–2½hours (on average) in order to complete the assignment. Reading quizzes and homework quizzes are not timed. Homework will always allow the student to request hints, and they have multiple chances to arrive at the correct answer.
- Required quizzes/extra credit quizzes: These are designed to give students a snapshot of where they are in their preparation for the upcoming exam. Quizzes consist of questions I have written and uploaded into Mastering, and the content and wording are similar to what they will find on their exams. Quizzes are timed, and questions are randomized to discourage group work.

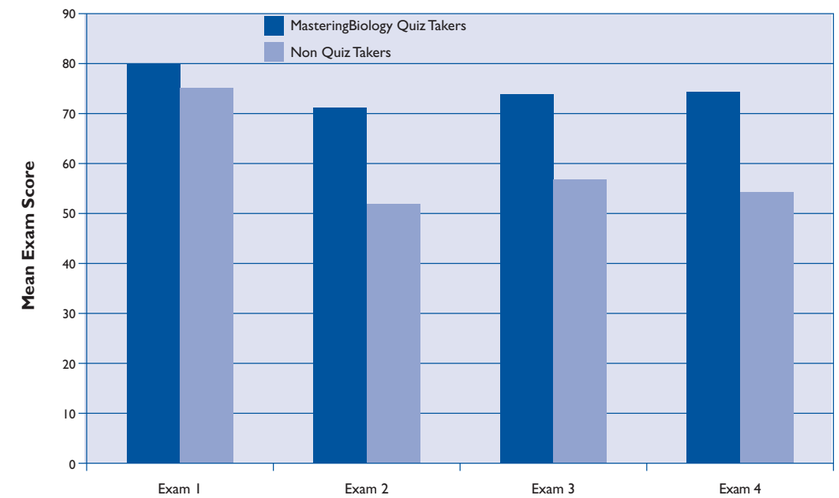
Results

Analysis of five sections of Biology 1406 from the Spring 2011 semester indicates that there is a statistically significant, positive correlation between the percentage of Mastering (all assignments available) completed by my students and their overall exam average at the end of the course ($r_s(138) = .571$, $P = .000$). I have also observed that students who took the optional/extra credit quizzes offered in the Spring 2011 semester performed significantly better on their exams as compared to those who opted not to take these quizzes. The benefit of taking these quizzes resulted in a significant difference in exam score means (at least a difference of 9–11 points), even if the students did not necessarily do well on the quizzes themselves. Mastering helps me to provide additional opportunity to practice retrieving the information in a timed, test-like setting, without my having to do so during instructional class time.

In general, students are very pleased with MasteringBiology. This is particularly evident when they enroll in their next science course—the instructors in these classes receive numerous requests for access to Mastering assignments if they are not already utilizing Mastering for their course. Student response has driven most of the Mastering use in our department.

These observations are further supported by the fact that I consistently have students enrolled in my Mastering course that are not even enrolled in my Biology class! These students are enrolled in sections taught by instructors that don't utilize MasteringBiology, and have opted into the Mastering homework available via my course ID, regardless of the fact that completing these assignments will not count towards their course average.

Exam Scores for Students Using vs. Not Using MasteringBiology Quizzes



Student Quotes

I began using Mastering as an optional extension for students to utilize outside of class. The most common feedback that I received was "Make Mastering mandatory!"

Another quote, from a "Top Ten" list compiled by students: "Visit the class website very often and use the tools provided! There are new videos, games and activities…also use the MasteringBiology website…it makes the class so much more awesome (is it even possible?!)."

Conclusion

Biology, for many students, is a new language to learn in a fairly compressed amount of time. It is full of unfamiliar terms and cannot always be pictured within the context of my students' life experiences. I recommend Mastering to my colleagues as a tool that they can provide to students that enables students to immerse themselves in this language beyond the classroom, in the time and place that is most convenient for them. It appeals to all modalities of learning, providing visual examples of hard-to-imagine processes, offering narration within BioFlix™ activities, and requiring active participation by the student as assignments are completed.

I have been using Mastering without the implementation of penalties for wrong answers on the homework, but will be adding some penalties next semester to combat the propensity that some students have to "click through until the right answer is located" when completing their homework. I am requiring completion of 10 quizzes this semester, and will be looking at the impact this has on student exam scores as I consider increasing the number of quiz offerings.

MasteringChemistry®

CASE STUDY

Course Name General Chemistry (2 semesters)

Credit Hours 5 credit hours/semester (total of 10 credit hours)

Basic Course Information This is a traditional course taught on campus. It consists of 4 lecture hours, 3 lab hours per week; the semester is effectively 15 weeks long. However, MasteringChemistry is a huge part of my course and I spend a minimum of 1 hour a night designing lessons, monitoring student work, and interacting with students, so I classify my course as a hybrid course.

Submitted by Robert Pribush, Butler University, IN

Assessment

There are 500 points in my course. Five exams, each worth 80 points (including the final exam), make up 400 of the points. Lab is worth 20 points. Mastering is 80 points, the same as one exam grade. The Mastering portion is enough credit to motivate students but not enough to inflate their overall course grade. Almost all students will earn the same grade with the Mastering grade included as they would based on exams alone. A few will earn half a grade higher due to the Mastering grade.

Implementation

I might be what you'd call a "Mastering Power User!" I've been a MasteringChemistry disciple since beta testing the program before its 2007 release. It is the best technology implementation I have ever used in my 38 years of teaching. I want my students to actually use their textbook, so I cover material in the order that it is presented in class. For every section covered there is an assignment that is named to direct student attention to the textbook section. For example, Assignment 5.08 is based on section 5.08 in the textbook. I try to keep my assignments to 10 problems or fewer and 1 hour or less per textbook section. Because Mastering has an amazing database that gives median time on task and relative difficulty level based on actual student usage, it is easy to see the time required for the class to complete the assignment. Considering that I cover about 10 chapters per semester, and each chapter has about eight sections that require mastery, my students do about 800 problems per semester. To keep the students on task, they are given two days to complete the assignment without penalty. They lose 25% each day they are late.

My assignments begin with tutorials that contain hints and a Socratic approach to helping students who need extra help. Important: I encourage students to use hints! I tell them that outright, and I neither give them extra credit nor penalize them for using or not using hints. This is contrary to the default setting, but it makes a huge difference to do it my way. Tutorials are followed by several end-of-chapter (EOC) problems with randomization and units features turned on when available. I give EOC problems for which the answers are not given in the textbook, and I no longer make solution manuals available in the bookstore.

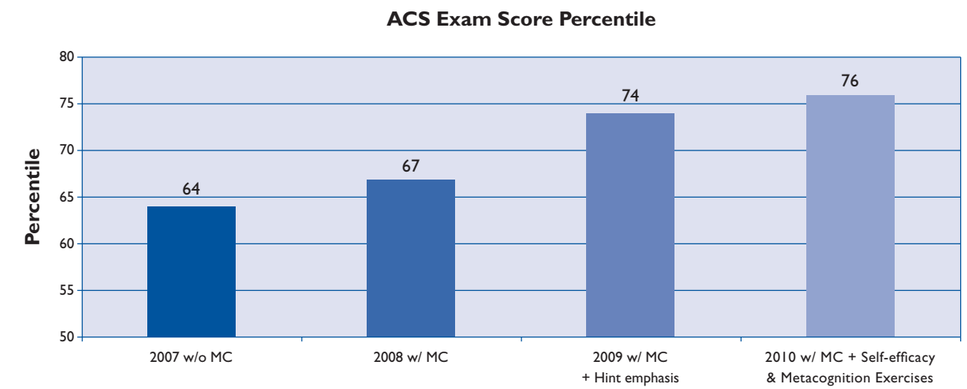
Every night I check my gradebook and look for the "pink" students so I can talk to them one-on-one to encourage them to get additional help, ideally from me. Whenever a student does come to me for help, whether during a live office hour or during my evening "office hours," I immediately look at that student's Mastering work to make sure that the student has used the hints and to identify his/her misconceptions. Mastering's diagnostic tools make for much more effective and efficient office hours.

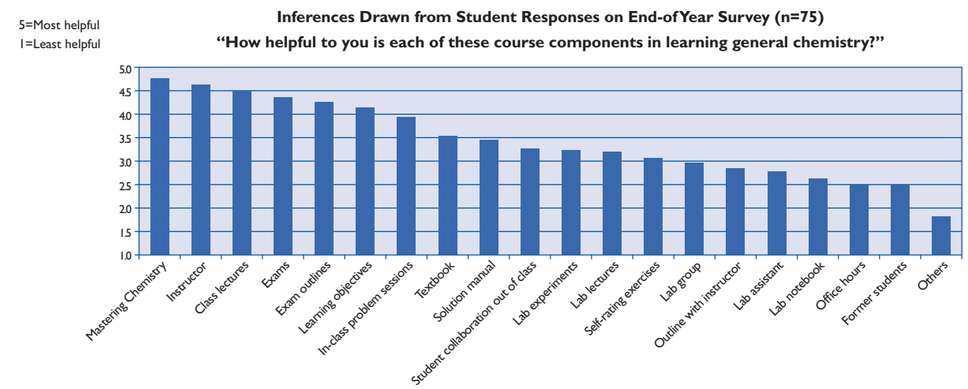
I also look at the class average on a given assignment. Anytime the average falls below 90% mastery, I rethink the approach I have taken in class and often reinforce the concept the next day with new examples or graphics.

Another feature I use is the new learning outcomes feature. This is a powerful (and nearly effortless) way to document student mastery of skills that transcend chapters. Adding this to the reasons I gave above makes a strong case for why anyone would want to use Mastering.

Results

I have collected significant qualitative and quantitative data on Mastering's impact on ACS Exam scores and students' perception of MasteringChemistry's effect.





I give the ACS standardized exam in General Chemistry as my final exam at the end of the second semester of the course. Since adopting Mastering, my class average increased steadily from the 64th percentile in 2007 to the 76th percentile in 2010. Class performance did decrease slightly in 2011, primarily due to student demographic factors.

In a survey that I gave to the class (n=75 students) asking them to rate 20 factors that had the greatest impact on their success in the course, MasteringChemistry rated #1, as shown in the graph above. I was gratified to see that the instructor rated #2! Students definitely recognize that Mastering has a positive impact on their study habits and their performance in class.

Conclusion

MasteringChemistry's impact on my course is best illustrated by my favorite success story—a student who dropped the class (and would have failed had she not dropped) the year before I used Mastering and retook the class the first year I used Mastering, earning an "A" the second time around. I had never experienced that kind of turnaround in repeat student performance, and it would not have happened without Mastering.

MasteringPhysics®

CASE STUDY

Course Name Physics I: Physics with Calculus

Credit Hours 3 credit hours

Basic Course Information 200 students per section, 2 sections = 400 students total. This is a traditional course taught on campus.

Submitted by Amy Pope, Clemson University, SC

Assesment

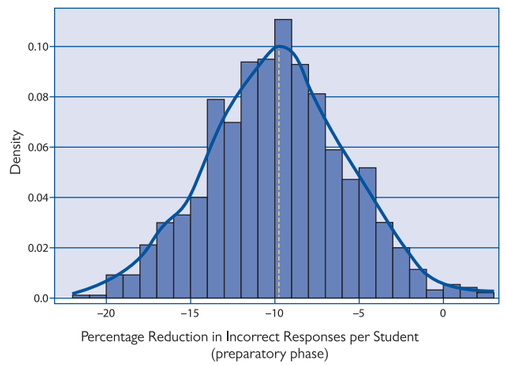
- 70%: In-class computerized tests/exams
- 20%: MasteringPhysics homework
- 10%: Classroom Response System

Implementation

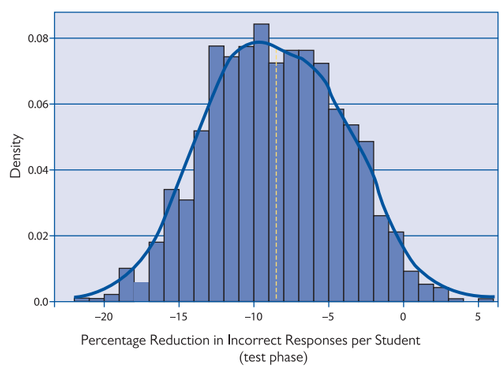
In a study designed to quantify Mastering's impact on learning transfer from tutorial questions to end-of-chapter (EOC) questions, students were divided into two groups (~130 students each). Both groups received the same first three chapter assignments in Mastering, identifying no statistically significant difference in the two groups' ability. In four subsequent assignments (from Chapters 4, 6, 8, and 9 in Knight, *Physics for Scientists & Engineers,* Second Edition), the first group (Tutorial Group) was given a series of preparatory items (MasteringPhysics tutorial items with hints and feedback), followed by two conceptually identical EOC questions. The second group (Non-Tutorial Group) received the same preparatory items (MasteringPhysics tutorials, but with the hints and feedback removed), followed by the same two EOC questions given to the tutorial group. The preparatory group that would receive tutorial instruction in one assignment would become the non-preparatory or the non-tutorial group on the next and vice versa. Thus, at the end of the study both student groups have received an equal number of tutorial and non-tutorial assignments. All items were assigned for credit.

Results

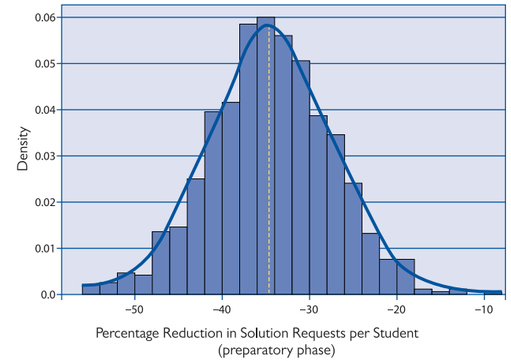
Students in the tutorial group submitted fewer wrong answers and requested fewer solution requests. During the preparatory phase, the tutorial group submitted fewer incorrect responses on 81% of the items. The average percentage reduction in incorrect responses per student due to tutorials is 10±4% (effect size = 0.2).



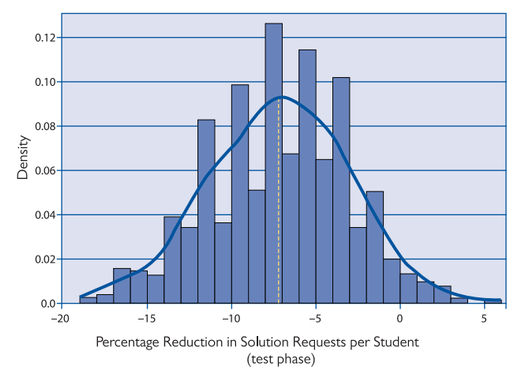
Similarly, the tutorial group submitted fewer incorrect responses on 63% of the EOC items (test phase). The average percentage reduction in incorrect responses per student due to tutorials in the test phase is 8±4% (effect size=0.1).



The average percentage reduction in solution requests per student on preparatory items due to having a tutorial as opposed to an identical non-tutorial is 34±7% (effect size=0.5).



Since the items are identical for both the tutorial and non-tutorial groups during the preparatory phase except for the scaffolding provided for the tutorial group, the reduction in solution requests for students in the tutorial group is indicative of learning from prior hints and answer-specific feedback within a given tutorial item. This effect is transferable from the preparatory phase to the test phase, although the effect diminishes by a factor of 0.6. The average percentage reduction in solution requests per student in the test phase due to having a tutorial as opposed to an identical non-tutorial is 7±4% (effect size=0.3).



Conclusion

From a replication perspective the above results are encouraging in that the percentage reduction in errors per student due to tutorial preparation is similar to the previous observations (11±3%) made under a micro-learning protocol (Evidence of problem-solving transfer in web-based Socratic tutor, Warnakulasooriya et al., Proceedings of the 2005 Physics Education Research Conference, Heron, McCullough, Marx (Eds.), pp. 41–43, American Institute of Physics). Hence the above is supportive evidence for the correctness of the previous conclusions of the reductions in incorrect responses due to tutorials. Furthermore, the reductions in errors observed under the test phase due to tutorials is encouraging since replication was not under identical settings but occurs after the relaxation of the previous protocol in which the test phase included a tutorial item immediately following a preparatory tutorial.

MyAccountingLab®

CASE STUDY

Carroll Community College
Westminster, MD

INSTRUCTOR Kate Demarest, Accounting Professor and Chair of Business and Information Technology department

COURSE Principles of Accounting I

TEXT Horngren, *Accounting*

TERMS COVERED 2008-2011

CONTRIBUTION OF MYACCOUNTINGLAB TO FINAL GRADE 20%

TYPES OF DATA REPORTED Improvement in drop/fail/withdraw (retention) rates over previous semesters, Improvement in final course grades

COURSE STRUCTURE Traditional

MOST ACCOUNTING INSTRUCTORS AGREE that to master accounting, skills must be practiced. Professor Kate Demarest at Carroll Community College (CCC) is well aware of the connection between homework and student success—and its challenges. "Every instructor wants their students to do a lot of homework, but the majority of students don't do the work unless it's collected and graded," she says. "The time it takes to grade the amount of homework necessary to make a difference is prohibitive." When Demarest and her fellow faculty tried assigning homework but not collecting it, the results were disappointing. "We got a lot of low exam grades, an unacceptable grade distribution, and a high dropout rate."

FINDING A SOLUTION WITH MYACCOUNTINGLAB

In 2008, the grade point average for accounting courses was 2.3 (out of 4.0), compared to a departmental average of 2.7 and a college average of 2.8. Furthermore, students were not progressing through the accounting sequence. Almost 35% of students dropped or failed Principles of Accounting I, compared to a college average of 16%. "We knew we had a problem, and we started actively looking for a solution," says Demarest. While attending a conference, Demarest saw a demonstration of MyAccountingLab. "When I saw the tutorials, the level of support, and the immediate feedback, a whole world opened up," she says. "I piloted the program in summer 2008 and was convinced enough to implement it immediately."

In Principles of Accounting I, students are graded primarily on test scores (approximately 75% of the final grade), with 20% allocated to out-of-class assignments and 5% to class participation. Using a replacement model, the out-of-class spreadsheet assignments were replaced with required homework assigned in MyAccountingLab.

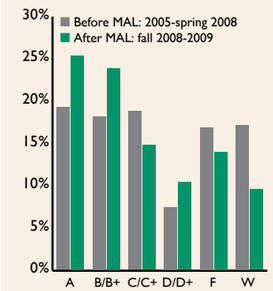
LEARNING WITH MYACCOUNTINGLAB

"MyAccountingLab provides students with enough practice that they understand the bigger picture and build a solid foundation on which to build more and more knowledge," says Demarest. The interactive nature of MyAccountingLab keeps students engaged. "It makes learning exciting for them, and students think it's more fun to work online than with paper and pencil." Demarest continues, "They perceive MyAccountingLab and the skills they learn through the program as more relevant to how they'd work in a real world work environment." Additionally, "MyAccountingLab promotes more time on task, which is invaluable in accounting." Demarest points out that in accounting courses, all subsequent knowledge builds on the first few chapters. "If students don't grasp the concepts at the onset, they're lost—often irreparably," she says. "MyAccountingLab provides students with enough practice that they understand the bigger picture and can lay a solid foundation on which to build their knowledge."

Demarest reports, "I used to have about 20 percent of my students doing homework. Now I have 95 percent. Those students who don't do well simply aren't using the program."

> "Students perceive MyAccountingLab and the **skills** they learn through the program as **more relevant** to how they'd work in a **real world** work environment."
>
> *—Professor Kate Demarest*

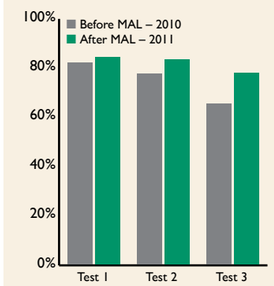
Grade Distributions in Principles of Accounting



ANALYSIS

With MyAccountingLab, drop/fail rates fell from 34% to 23% while A/B rates improved from 37% to 49%.

Principles of Accounting I Scores on Multiple Choice Questions



ANALYSIS

With MyAccountingLab, students' test grades improved progressively through the term.

TEACHING WITH MYACCOUNTINGLAB

With MyAccountingLab, instructors can quickly mine homework data to find out where students are having problems and to customize instruction. "Instead of a room of students with no idea of what they're talking about, my instructors now look out at a room of students with the light bulb on in their heads!" exclaims Demarest. MyAccountingLab has made a difference particularly for CCC's online sections. "Our classes used to be solely one-dimensional: read the book and do the problems. Now we have DemoDocs, videos on specific topics, and a host of other interactive and multimedia content. It's made an incredible difference. Additionally, multimedia resources can be used during class or outside of class for a quick review of the concepts."

RESULTS

Within the first year, it was clear that the MyAccountingLab course redesign was effective. The drop/fail rate went from 34% to 23% and the A/B rate improved from 37% to 49%. Based on the successful redesign of the Principles sequence, MyAccountingLab is now in use for cost accounting, auditing, and tax classes.

The redesigned Principles sequence has generated new insights into student learning. While grades on tests improved after adoption of MyAccountingLab, most of the improvement was on the problem section of the tests, with a much smaller improvement on the multiple choice portion. To address this disparity, multiple choice questions were added to the homework. After this change, instructors saw a significant increase in performance on the multiple choice portion of the exams, with performance increasing from the first test through the last .

Demarest wondered how students would value MyAccountingLab. The responses were uniformly positive. At the end of every semester, they unanimously report that the program "is absolutely worth it" and that they "would spend the money again."

With MyAccountingLab, students are much more successful in Principles of Accounting, as well as other courses within the department. Instruction has become much more cooperative and learner-centered. MyAccountingLab gives students the tools to be successful. Student Tom Cossentino sums it up, "With MyAccountingLab, I can complete homework anywhere I have internet access. Although I still consult my text frequently, I find that I can learn just about everything in the text by the use of MyAccountingLab and its resources."

PEARSON

www.pearsonhighered.com/mylabmastering

For a product tour or to find out more, please visit www.myaccountinglab.com

MyEconLab®

A SUCCESS STORY

Füsun F. Gönül
Associate Professor of Marketing
Slippery Rock University, Slippery Rock, PA

COURSE NAME: Principles of Microeconomics / Principles of Macroeconomics
COURSE FORMAT: Traditional • CREDIT HOURS: 3
TEXT: Hubbard & O'Brien, *Microeconomics*; Hubbard & O'Brien, *Macroeconomics*

"Student grades on final exams have increased dramatically."

COURSE INFORMATION

- Introductory courses surveying the fundamental skills of economics
- Prerequisites for Economics majors, limited to approx. 45 students
- Freshmen and sophomores
- Class meets three times per week for 50 minutes

Before using MyEconLab, I taught my courses using content from various textbooks. In general, most of my class time required me to recite material that my students were supposed to have already read in the textbook. As a result, there was little time for class discussion because I had to cover the basic concepts to ensure my students received exposure to the material. When my classes started having less time for conceptual application, I knew it was time to redesign my course.

ASSESSMENT

- Three MyEconLab exams: 45%
- Final exam: 30%
- Ten homework assignments: 15%
- Class participation: 10%

MYLAB IMPLEMENTATION The three exams, automatically graded in MyEconLab, give me a sense of how my students retain and comprehend the information in a broad context. They are also a good indicator of how my students are going to perform on the final exam. The practice and recitation component of the class comes through ten homework assignments.

MYLAB BENEFITS Throughout my classes, the quality of education and learning has increased dramatically. First, students are more engaged when they enter the classroom because they are required to master the content before they come to my lectures. Second, students are more disciplined because there are no exceptions with deadlines that are set in the program. Since I set the due dates for assignments early in the semester, students know when they must complete the work and there are no excuses. Lastly, and most importantly, student grades have increased dramatically on my final exams. In general, there is over 10% difference between grades from before I started using the program compared to now.

My course redesign with MyEconLab increased the level of assessment and intervention in my class. Because of the guidance and supplementary instruction the program can provide, students are more likely to complete their homework with accuracy and come to class prepared.

CONCLUSION Because of the learning gains from my introductory classes, other professors from the department have also started using MyEconLab. Before using MyEconLab, I had about five students drop the course every semester. Now, as more students are succeeding, I rarely have any students drop the course. MyEconLab has transformed my class and allowed my students to realize greater academic gains. Throughout the economics department, students are more excited to complete their work and success rates are accelerating.

> "MyEconLab has transformed my class and allowed my students to realize greater academic gains."
>
> —*Professor Füsun F. Gönül*

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MyFoundationsLab®

A SUCCESS STORY

Dr. David Heredia
College Prep Reading Faculty
Miami Dade College, Miami, FL

COURSE NAME: Developmental Reading • COURSE FORMAT: Lab • CREDIT HOURS: 3
TEXT: D. J. Henry, *The Master Reader*

"Students felt engaged due to personalized modular instruction."

COURSE INFORMATION

- NAME OF PROGRAM: College Preparatory Developmental Studies
- PROGRAM TYPE: College Success / Tutoring Support / Accelerated Remediation / Early Intervention

ASSESSMENT

- Students prescribed a modular, personalized Learning Path in MyFoundationsLab
- On completing their personalized Learning Path, students reassessed using the ACCUPLACER diagnostic Post-Test

MYLAB IMPLEMENTATION MyFoundationsLab was selected to reform instructional practices at Miami Dade. Faculty and administrators have been actively seeking alternative forms of instruction and remediation to make the developmental programs more efficient and effective. We adopted MyFoundationsLab to help each student engage actively with his or her own personalized learning experience and to achieve proficiency more rapidly. As a result, we expected improved completion rates at Miami Dade.

MyFoundationsLab was presented to students in Spring 2012 as a tutorial lab component of a developmental reading course. The class consisted of 25 students with various ability levels. The implementation of MyFoundationsLab focused on the modularized reading remediation. Each module contains an overview of skills, model of skill, animations, skill recall (quiz), practice applications, and mastery quizzes. These features were used continuously throughout the pilot program.

MYLAB BENEFITS Overall, students enjoyed working with MyFoundationsLab and, as a result, showed progress within various academic skills. Students felt engaged due to personalized modular instruction that was geared towards their academic needs. Students had the desire to succeed based upon improving their own individualized learning.

Through data analysis and ACCUPLACER diagnostic score reports, students showed accountability and motivation to improve scores within their assessments. Students were kept motivated and engaged within personal goals that fostered academic success within reading competencies.

CONCLUSION Students who did better on the pre-ACCUPLACER diagnostic tended to have had a richer experience than those who scored poorly. Students who scored poorly needed much more assistance. They felt more overwhelmed and needed a great deal of reinforcement and assistance to succeed within the modules.

Overall, students were independently engaged with MyFoundationsLab and showed significant growth in all areas of reading comprehension. MyFoundationsLab has improved student preparedness for college credit courses by enhancing critical thinking and study skills and by fostering active student engagement and motivation leading to improved student performance.

Further data analysis is forthcoming on the correlation between time spent in MyFoundationsLab and test scores and the difference in Pre- and Post-ACCUPLACER diagnostic scores.

> "Students had the desire to succeed based upon improving their own individualized learning."
>
> —*Dr. David Heredia*

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MyITLab®

CASE STUDY

The University of North Carolina at Greensboro

Greensboro, NC

INSTRUCTOR Maurie Lockley, Lecturer of Information Systems and Operations Management
COURSE Introduction to Business Computing
TEXT Grauer, et al., *Exploring Microsoft Office*
TERMS COVERED Fall 2008-Spring 2011
CONTRIBUTION OF MYITLAB TO FINAL GRADE 100%
TYPES OF DATA REPORTED Improvement in drop/fail/withdraw (retention) rates for subsequent course
COURSE STRUCTURE Traditional; Online

MYLAB IMPLEMENTATION

For each chapter, students are required to take three or four simulation quizzes and a 15- to 20-question multiple-choice quiz on concept material; for each unit, they complete an application-based, hands-on project. Students do all work on their personal computers.

MYITLAB INSTRUCTOR BENEFITS

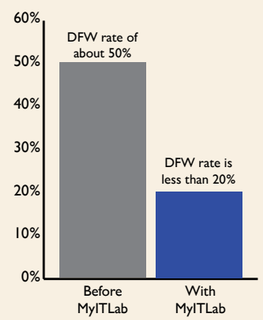
Teaching over 1200 students a year, MyITLab permits Maurie Lockley and her colleague to serve a large number of students without diminishing academic rigor, student service, or success. "MyITLab helps me reduce the amount of instructor-graded homework without reducing the level of student achievement," she says. "Before MyITLab, I could assign only two or three exercises per chapter because the exercises needed to be hand scored. Now I can assign more exercises and ensure that students get the practice they need." Lockley also notes that in a semester, "Instructors who use MyITLab can cover more ground. Students actually master more skills in our courses now than they did before we required MyITLab."

> "I am extremely confident about the reliability of MyITLab. I know that when students call me with problems, the problems are not with the program. This product works."
>
> —*Instructor Maurie Lockley*

Lockley appreciates that MyITLab helps her stay connected to her students. "My favorite feature is Identify Inactive Students," she says. "In 30 seconds, I can discover what's happening with my entire class. Sometimes I reach out to inactive students, and they respond with, 'It's OK, I worked ahead and finished it all.' Other times, they really are in trouble. And that 30-second time investment is all it takes to let them know I care and to keep them on track before they get too far behind to recover."

In Lockley's course, students may submit their projects an unlimited number of times until they achieve the grade desired. Some students submit a project again and again until they achieve perfection. Before MyITLab, "Even if a student wanted to learn from their mistakes and resubmit an assignment, we did not have sufficient resources to permit resubmissions. In the old system, scarce resources trumped good pedagogy—our resources are now even more scarce and MyITLab grows in importance."

Performance in subsequent Excel and Access course



ANALYSIS

With MyITLab, students' foundational skills are stronger, leading to better retention/performance and fewer Drop/Fail/Withdraws in the sophomore-level course that follows Intro to Business Computing.

> "MyITLab is so **broad and rich** that all who employ it can **teach** in their **own way**."
>
> —*Instructor Maurie Lockley*

MYITLAB STUDENT BENEFITS

Students like using MyITLab. For nontraditional students—those who are returning to school, are already working, or are otherwise balancing schoolwork and personal obligations—MyITLab offers the means to study whenever and wherever they want. "My students' favorite feature is probably Save for Later," says Lockley. "They can work on assignments around their own schedule. This is particularly helpful for my distance and adult learners." Lockley has noticed another change since using MyITLab: her students read and use their books more than before. She notes, "I am seeing dirty books for the first time in my career: stuff is written in the margins, etc."

Students come to UNCG from around the world; at least 15 percent of each of Lockley's classes consists of nonnative English speakers. "The multimedia aspect is a huge help," she says. "The international students frequently bring headphones to class so they can utilize the sound capabilities. And when I go into the usage logs, I see that they also use the optional, audio-narrated PowerPoint demonstrations. Again, the narrated PowerPoint demonstrations take me 30 seconds to make available—but it's 30 seconds that can tremendously impact students' lives and their odds of a job in the future."

RESULTS

Lockley also teaches the sophomore-level advanced Excel and Access course (average enrollment: 80 students/year) and has found an incredible improvement in the drop/fail/withdraw (DFW) rate. Lockley says, "Before implementing MyITLab, I had a DFW rate of about 50 percent. Now, not only is the DFW rate less than 20 percent, but the mean scores are in the mid 80s. I attribute the change to the fact that the students used MyITLab in their previous course, and their foundation skills are stronger."

CONCLUSION

Lockley believes that MyITLab makes a difference in careers as well as classrooms. "More and more, students say to me, 'In my job interview I was tested on something that looked just like MyITLab. If I hadn't worked in MyITLab, there's no way I could have passed the test,'" says Lockley. From a technology standpoint, MyITLab covers all bases. "I have laptops in my section running all types of operating systems: Vista, Windows, XP," she says. "But MyITLab is flexible enough to handle it—every system, in on-campus and distance courses, undergraduate and graduate levels." Lockley says that that kind of flexibility is one of the many reasons for MyITLab's popularity. "The last generation of online courseware was so narrowly focused that the program dictated course delivery," she says. "MyITLab is so broad and rich that all who employ it can teach in their own way. In my work as a Faculty Advisor helping other schools set up their programs, I see that everybody uses MyITLab differently; everybody does it in a way that works best for their population, and MyITLab helps all of them achieve success."

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MyMathLab®

CASE STUDY

Brookhaven College — Farmers Branch, TX

Product Used MyMathLab
Course Names Prealgebra, Beginning, Introductory, and Intermediate Algebra
Credit Hours Three

Brookhaven College
DALLAS COUNTY COMMUNITY COLLEGE DISTRICT

KEY TAKE-AWAY By upgrading its use of MyMathLab homework from optional to required, adding MyMathLab quizzes, and implementing common exams, Brookhaven College significantly increased its Intermediate Algebra pass rates and decreased its DFW rates.

Textbook in Use

Beginning and Intermediate Algebra, 4e, Margaret L. Lial, John Hornsby, Terry McGinnis

Course Implementation

Course Design

Prior to spring 2010, MyMathLab was offered only as an optional homework supplement and for no credit. After a successful pilot in fall 2009, more-comprehensive use of MyMathLab was incorporated into all developmental math courses (except Basic Math) and its use is now required for both homework and quizzes. In addition, Coordinator Courses are created and each instructor is given a member course that includes homework assignments, quizzes, unit/test reviews, and a review of the final exam. Course assignments are standardized throughout the department to promote content alignment, minimize course drift, and facilitate relevant data comparisons and analyses.

Assessments

10 percent — MyMathLab homework
Completed at home or using any of the computers on campus. Soft deadlines are set, and students are encouraged to use the learning aids to complete homework assignments the class period following lecture. Assignments remain open until the corresponding test deadline.

10 percent — MyMathLab quizzes
Completed at home or by using any of the computers on campus. Students have one attempt and may not use any of the program's learning aids.

60 percent — Tests
Proctored, instructor created, pencil and paper

20 percent — Departmental final exam
Proctored, pencil and paper

Tutors are available in the school's math lab to help students complete MyMathLab homework assignments.

Use of MyMathLab

Students use MyMathLab to complete homework assignments, unit/test reviews, and quizzes. They use the eBook and may use all available learning aids during completion of homework assignments.

Instructors pull most homework questions from the program's bank of problems and are encouraged to use the item analysis feature to create problems that can be used for in-class reviews or warm-up exercises. The coordinator course is employed throughout the department.

Use of MyMathLab contributes 20 percent to a student's final course grade.

Results and Data

In a comparison of spring 2009 and spring 2010 student success rates, Sharon Jackson, professor, found that Intermediate Algebra courses that required use of MyMathLab in the new format experienced both significantly increased pass rates and decreased drop/fail/withdrawal (DFW) rates. Further, an examination of all of the developmental math courses using MyMathLab showed a strong correlation between successful completion of MyMathLab homework and a final course grade of A, B, or C.

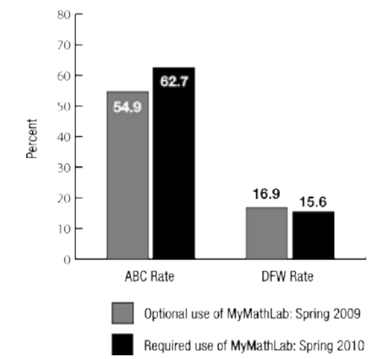


Figure 1. Comparison of Intermediate Algebra ABC and DFW Rates before and after Required Use of MyMathLab, Spring 2009 and Spring 2010 (n=1,147)

Figure 1 shows that intermediate algebra courses, which required use of MyMathLab, had a combined average ABC rate 14.2 percent higher than those courses that did not require use of MyMathLab. Similarly, intermediate algebra courses, which required use of MyMathLab showed a decrease of 7.7 percent in the combined average DFW.

Prealgebra	Introductory Algebra	Beginning Algebra	Intermediate Algebra
86.1%	81.1%	81.7%	88.9%

Table 1. Pass Rates by Course of Developmental Math Students, who Earned at least 70 Percent on MyMathLab Homework

Table 1 indicates that for Prealgebra, Introductory Algebra, Beginning Algebra, and Intermediate Algebra there is a positive correlation between earning a homework score of at least 70 percent and completing the course with a final grade of A, B, or C. Conversely, instructors report that students who have trouble completing homework and other assignments generally didn't complete the course successfully.

The Student Experience

Via the requirement that students complete homework by using MyMathLab, their time on task is increased, their understanding of the material is greater, and their accountability for their own learning is more apparent. One indication of this is how students ask questions. Jackson reports that instead of saying, "I don't understand how to do it," students now ask specific step-by-step questions.

An end-of-semester student survey overwhelmingly reinforced that the positive changes instructors observed were also recognized by their students.

- 78 percent agreed or strongly agreed that MyMathLab helped them understand the subject matter better.
- 75 percent agreed or strongly agreed that MyMathLab helped them prepare for tests.
- 82 percent agreed or strongly agreed that the resources available in MyMathLab encouraged them to stay in the course.

Students said the following.

- "I am a college graduate returning to school 32 years after receiving a bachelor's degree. MyMathLab was enormously helpful. When I had difficulties grasping a concept, I worked multiple homework questions using the Help Me Solve This feature until I got it. It was essential to my successful completion of this course."
- "MyMathLab is an excellent program. It provided all the resources I needed to succeed."
- "MyMathLab has been so helpful: it encouraged me, and I've seen improvement as a result. I have no doubt it will help me on my final score."

Conclusions

Data indicates unequivocally that requiring MyMathLab for homework and quizzes significantly improves student pass rates and decreases DFW rates. Students spend more time in hands-on practice and as a result, gain the confidence to persist in class and achieve higher scores. And because the courses are now standardized throughout the department, results can be compared and analyzed, and any necessary adjustments quickly and easily implemented.

Submitted by Sharon Jackson, Professor
Brookhaven College

MyMathLab®

CASE STUDY

Mississippi State University — Starkville, MS

Product Used	MyMathLab
Course Name	College Algebra
Credit Hours	Three

MISSISSIPPI STATE UNIVERSITY

KEY TAKE-AWAY MyMathLab's automatic grading means instructors can assign more homework and students can spend more time on task. Despite growing enrollments and increased ACT requirements, student success, exam scores, and retention rates have not only sustained, they've improved.

Textbook in Use

College Algebra, 5e, Robert F. Blitzer

Course Implementation

Course Design

Students spend two hours each week in a lecture-format class and at least two additional hours each week in a math lab. Tutors are available in the lab to help with homework and quiz/test preparation. MyMathLab was implemented in fall 2004 for homework and quizzes. In fall 2005, its use was broadened to include tests and the final exam.

Assessments

10 percent	MyMathLab homework (required) *Students may complete homework from any location. They are offered unlimited attempts over the span of one week.*
12 percent	MyMathLab quizzes *Students take 12–16 proctored quizzes in the math lab.*
40 percent	MyMathLab tests *Students take four proctored tests in the math lab.*
30 percent	MyMathLab final exam *Proctored and taken in the math lab.*
8 percent	Non-MyMathLab work

Use of MyMathLab

MyMathLab is used for creating and completing homework assignments, quizzes, proctored tests, and the final exam. Homework questions are both drawn from MyMathLab's bank of problems—which directly correlate to the textbook—and created with MyMathLab's custom exercise builder. The majority of quiz and test questions are custom-built. The coordinator course function ensures consistent grading and delivery of course objectives across up to 14 sections a semester.

Students are encouraged to use the Gradebook to review their assignments before quizzes and tests and to use the Study Plan after taking them.

Use of MyMathLab contributes 92 percent to a student's final course grade.

Results and Data

Figures 1–6 indicate that despite steadily growing enrollments and increased ACT requirements (in fall 2010) Mississippi State University College Algebra students have been significantly more successful since full adoption of MyMathLab in fall 2005.

- The average fall success rate increased 38 percent
- The average spring success rate increased 17 percent
- The average fall exam score increased 32 points
- The average spring exam score increased 31 points
- The average fall withdrawal rate decreased 73 percent
- The average spring withdrawal rate decreased 50 percent

In addition, Kimberly Walters, math instructor, reports that students who earn a C or better in College Algebra using MyMathLab are more successful in subsequent courses. Based on a longitudinal study and using a four-point scale, College Algebra students who used MyMathLab earned average grade points of 2.49 in trigonometry, 2.34 in business calculus, and 2.51 in elementary statistics.

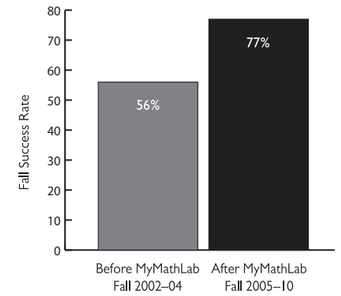


Figure 1. Comparison of Average Fall College Algebra Success Rates before and after Full MyMathLab Adoption

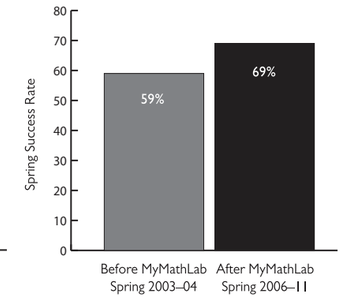


Figure 2. Comparison of Average Spring College Algebra Success Rates before and after Full MyMathLab Adoption

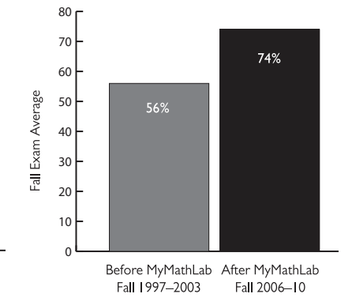


Figure 3. Comparison of Average Fall College Algebra Final Exam Scores before and after Full MyMathLab Adoption

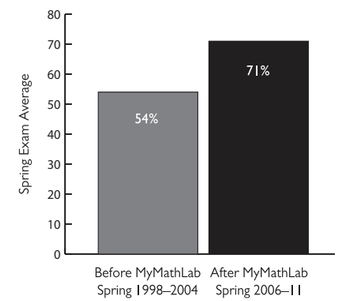


Figure 4. Comparison of Average Spring College Algebra Final Exam Scores before and after Full MyMathLab Adoption

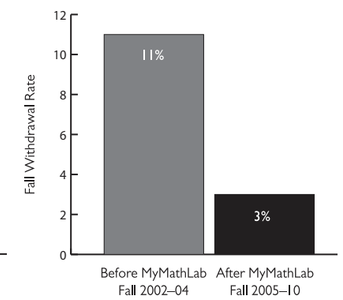


Figure 5. Comparison of Average Fall College Algebra Withdrawal Rates before and after Full MyMathLab Adoption

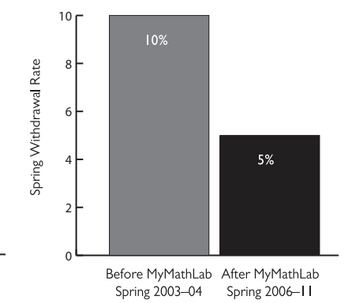


Figure 6. Comparison of Average Spring College Algebra Withdrawal Rates before and after Full MyMathLab Adoption

The Student Experience

Student surveys indicate that Walters' students connect their use of MyMathLab with increased success.

- "MyMathLab is awesome. I used the Study Plan to study for tests, and I could work problems as much as I wanted."
- "MyMathLab helped me stay interested in algebra and not dread homework as much."
- "The interactivity helped a lot. It was like having the teacher there with me."

Conclusions

Walters sees the positive impact MyMathLab has on her students. "My students are more successful," she says. "They have more confidence in their abilities because they are able to practice more than they ever could in the past."

Most important, Walters' results are sustainable over time. "Our withdrawal rates are holding steady at 5 percent and less and our success rates keep climbing on a comparative (fall to fall, spring to spring) basis," she says. "This is particularly impressive given that our enrollments have increased and in the fall of 2010 we increased our College Algebra ACT requirement. Equally important, the withdrawals we do have are faster—they occur earlier in the semester, which means that by using MyMathLab students waste less time and less money."

Submitted by Kimberly Walters, Instructor
Mississippi State University

MyMathLab®

CASE STUDY

Wilbur Wright College, City Colleges of Chicago — Chicago, IL

Products Used	MyMathLab, MyMathTest
Course Names	Prealgebra, Introductory Algebra, Intermediate Algebra
Credit Hours	Six/Six/Five

KEY TAKE-AWAY Redesigning developmental courses with MyMathLab and MyMathTest ensures that Wilbur Wright College students are accurately placed and receive the support they need to quickly and successfully progress to college- and workforce-level courses.

Textbook in Use

Prealgebra and Introductory Algebra, 3e, Martin-Gay, *Intermediate Algebra,* 5e, Martin-Gay

Course Implementation

Course Design

Starting in 2009, Kevin Li, dean of instruction at Wilbur Wright College, one of the City Colleges of Chicago, redesigned the college's developmental math lecture classes using a Changing the Equation grant from the the National Center for Academic Transformation and employing MyMathLab and MyMathTest.

The new program, Math On Demand: A Modularized, Accelerated Developmental Math Program, comprises a modularized, student-centered curriculum designed to shorten students' developmental path—helping them quickly and successfully progress from high school to both college and the workforce.

The use of MyMathTest enables more accurate placement, which leads to more success with MyMathLab. As a result, students are able to not only pass the levels they are placed in, but may finish up to three levels in one semester if they are capable of doing so.

The school uses MyMathTest in its refresher programs, as well as the Summer Bridge program. For assessments, Li uses a combination of MyMathTest practice tests, Pearson-imported prepared tests, and tests that he creates himself. Students use the program's study tests before and between test attempts.

Assessments

40 percent	Tests/exam
30 percent	Module completion
15 percent	Note taking
15 percent	Participation

Use of MyMathLab

Li and his students use MyMathLab's eText, videos, glossary, and Help Me Solve This feature.

Use of MyMathLab contributes 100 percent to a student's final course grade.

Results and Data

Li's redesign was immediately successful.

- In Fall 2010, the program generated an 8.75 percent increase in retention and a 19.25 percent increase in course success compared to the school's traditional classes.
- The Summer Intermediate Algebra student success rate increased 24.5 percent—from 65.5 percent in 2010 using the traditional course to 81.6 percent in 2011 using MyMathLab and the Math on Demand program. Retention rates also increased.
- Some students have been able to skip one or two developmental math levels.

The higher retention rate reported in the redesigned courses suggests that by providing students with real-time assessment data and class standing information, students are armed with exactly what they need to learn to succeed and are more likely to persevere—and less likely to withdraw.

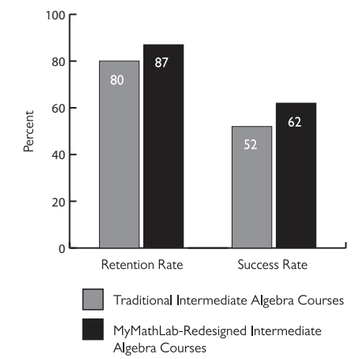


Figure 1. Retention and Success Rates from MyMathLab-Redesigned and Traditional Fall 2010 Intermediate Algebra Courses

	Traditional	MyMathLab Redesign	Percent Change
Retention Rate	80%	87%	+8.75%
Success Rate	52%	62%	+19.25%

Table 1. Retention and Success Rates from MyMathLab-Redesigned and Traditional Fall 2010 Intermediate Algebra Courses

	Traditional	MyMathLab Redesign	Percent Change
Success Rate	65.5%	81.6%	+24.5%

Table 2. Success Rates from Traditional and MyMathLab-Redesigned Summer Intermediate Algebra Courses, 2010–2011

The Student Experience

Integrating MyMathTest and MyMathLab into the program has facilitated more one-on-one assistance from instructors and increased student/faculty collaboration.

Li's students are some of the biggest advocates of the redesigned program and offer positive feedback about its impact on their learning.

- "I learned more math during these past few weeks than during all my years in high school."
- "I like that the online textbook walks me through the materials. By clicking a button, I get step-by-step instructions. I prefer it over traditional courses."
- "This format is great! The course helped me to increase my understanding of math. I've been getting As and Bs on all my assignments. Previously, in my traditional lecture math course, I struggled. The redesigned program both increased my grades and increased my motivation and self-confidence around math."

Conclusions

Both qualitative and quantitative data support the potential of Li's redesigned program for students, faculty, and the college. Key benefits include:

- Instructors are able to work one-on-one with students based upon individual student strengths, weaknesses, needs, and goals.
- Real-time assessment is possible.
- 4–5 hours per week is spent in the math lab performing hands-on tasks.
- Students can identify their academic and career tracks early in their academic journey.
- Students make a connection between math skills and their future career aspirations.

Li anticipates that the program will ultimately reap the following outcomes:

- Increased enrollments in math courses
- Increased persistence rates
- Increased success in subsequent math courses
- Increased number of developmental education levels that students can skip
- Increased institutional productivity via increased class sizes resulting in reduced institutional costs over time

Submitted by Kevin Li, Dean of Instruction
Wilbur Wright College, City Colleges of Chicago

TWO YEAR • 10,000–20,000 STUDENTS

MyMathLabPlus®

CASE STUDY

Pearl River Community College — Poplarville, MS

Product Used	MyMathLabPlus
Course Name	Intermediate Algebra, College Algebra
Credit Hours	Three

KEY TAKE-AWAY

After implementing mastery learning and personalized learning best practices into its MyMathLabPlus-enabled emporium redesign, PRCC's student gains skyrocketed: success rates improved, withdrawal rates decreased, and students persevered where once they had quit.

Textbook in Use

Intermediate Algebra, 4e, Elayn Martin-Gay; *College Algebra,* 4e, Judith A. Beecher, Judith A. Penna, Marvin L. Bittinger

Course Implementation

Course Design

Pearl River Community College (PRCC) redesigned its Intermediate Algebra and College Algebra courses into a modular format using MyMathLabPlus and the National Center for Academic Transformation's emporium model. Each course comprises approximately 12 modules; each module includes faculty-created video lectures, guided lecture notes, homework assignments, and a module test.

Each week, students attend one hour in an instructor-led class and at least two hours in the school's MathPower Lab. During class, students meet individually with the instructor, who helps them assess progress and determine goals for the coming week. In the lab, students receive help from faculty and student tutors, view videos, and take tests.

Students demonstrate mastery of each assignment before proceeding to the next. Students who earn a grade of C or better in Intermediate Algebra may immediately enroll in College Algebra. Modules completed in the second course roll to the next semester. Students are not charged for this second course unless it is completed within the semester.

Assessments

10 percent	Lab grade
15 percent	Homework
50 percent	Tests
25 percent	Final exam

Use of MyMathLabPlus

Students access all homework, tests, guided notes, and video lectures in MyMathLabPlus. Students are encouraged to use the program's eText and learning resources while completing homework assignments.

Instructors use the item analysis feature in MyMathLabPlus to compare student learning outcomes per course section and per semester. The program's coordinator course feature is used to ensure consistency across sections.

Use of MyMathLabPlus contributes 90 percent to a student's final grade.

Results and Data

PRCC is using a number of measurements to assess the efficacy of its redesign: success rates, withdrawal rates, and the rate of initially unsuccessful students returning to complete the course. All showed extremely positive gains.

Figure 1 shows that the average pass rate for Intermediate Algebra increased by 39 percent after the MyMathLabPlus redesign. Similarly, pass rates for College Algebra increased by 28 percent after redesign.

Figure 2 shows that the average withdrawal rate for Intermediate Algebra decreased by 27 percent after redesign. Withdrawal rates for College Algebra decreased a substantial by 60 percent after redesign.

Improving the number of students who returned to their studies after earning a D, F, or W was a primary goal of the redesign. Figure 3 shows it worked. The average return rate for Intermediate Algebra increased by 76 percent after redesign with MyMathLabPlus. Return rates for College Algebra increased by 61 percent after redesign.

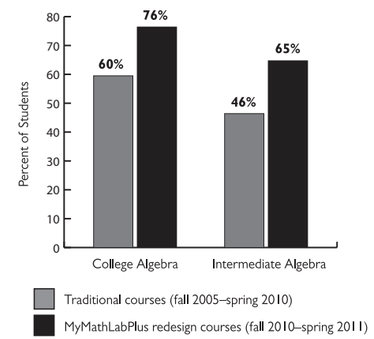


Figure 1. Comparison of Student Success Rates in College Algebra and Intermediate Algebra before and after Redesign with MyMathLab Plus (n=8,749)

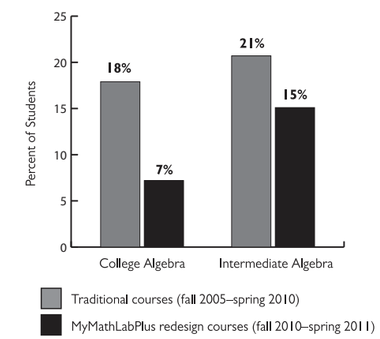


Figure 2. Comparison of Withdrawal Rates in College Algebra and Intermediate Algebra before and after Redesign with MyMathLab Plus (n=3,001)

The Student Experience

In a 2011 survey, students responded with the following statements when asked how the program assisted them in learning the subject matter.

- "If a student failed this class it was their own fault because help was provided in numerous ways."
- "I used the extra practice provided through the online mathematics lab to better prepare myself for unit tests."
- "The technology made [content] easily accessible when I had time to work. If I needed personal help, there were teachers or other students available in the math lab."
- "The ability to rewind a lecture was invaluable."
- "I was able to work from home and finish this class in only five weeks!"

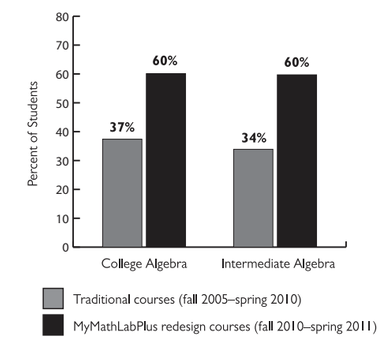


Figure 3. Comparison of Return Rates for Initially Unsuccessful Students in College Algebra and Intermediate Algebra before and after Redesign with MyMathLab Plus (n=2,613)

Conclusions

By implementing MyMathLabPlus in their NCAT redesign, PRCC faculty were able to improve pedagogical practices in both their Intermediate Algebra and College Algebra courses and ensure that consistent quality and learning objectives are met throughout all sections of the course. The resulting student gains have been dramatic—faculty couldn't be more pleased. "We love working with MyMathLabPlus—it's changed how we do everything," says Judy Roane, mathematics instructor and MyMathLabPlus administor. "Our students didn't do homework before, and now they do. Perhaps most important, students that were initially unsuccessful are returning to complete the courses at more than twice the original rate. It's incredibly fulfilling to see."

Submitted by Judy Roane, Mathematics Instructor and MyMathLabPlus Administrator
Dr. Ross Setze, Physics Instructor
Pearl River Community College

MyPsychLab®

CASE STUDY

University of North Carolina—Charlotte

Charlotte, North Carolina

INSTRUCTOR Sue Spaulding

COURSE General Psychology

TEXT Understanding Psychology *by Charles G. Morris and Albert A. Maisto with MyPsychLab*

TERM COVERED Spring 2011

CONTRIBUTION OF MYPSYCHLAB TO FINAL GRADE 30%

TYPES OF DATA REPORTED Improvement in student engagement and participation; correlation between time spent in MyPsychLab and final course average; savings in classroom and teaching resources

COURSE STRUCTURE Hybrid

FRUSTRATED WITH STUDENTS' RELUCTANCE to engage actively with course materials, Professor Sue Spaulding and her three University of North Carolina—Charlotte colleagues embarked on a redesign of their General Psychology course into a hybrid format using MyPsychLab. Professor Spaulding identified a set of ambitious goals for the redesigned course:

- To motivate students to take more responsibility for their learning outcomes
- To give students access to sophisticated educational technology resources
- To serve more students
- To maximize limited space resources
- To deliver equivalent learning at reduced cost

The redesigned course was launched in pilot form in spring 2011 with two hybrid sections and one traditional section. For the hybrid sections, one of two weekly face-to-face class meetings was replaced with students' working independently online in MyPsychLab. The remaining face-to-face meeting was changed from a standard lecture to a more interactive session featuring demonstrations and class participation. Students in the traditional section were encouraged to earn extra credit by working independently in MyPsychLab.

Teaching with MyPsychLab

Professor Spaulding reports that she and her colleagues (who, together, boast over 85 years of experience teaching the Introduction to Psychology course) were invigorated by the process of creating a MyPsychLab-based hybrid course.

"MyPsychLab is so flexible and the course creation process is easy," says Spaulding.

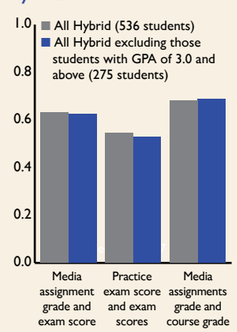
"Customizing my course was a pleasure. I am impressed with the breadth of high-quality media assignments and activities MyPsychLab offers."

Learning with MyPsychLab

Students in the hybrid sections worked independently in MyPsychLab, completing the assigned media assignments and following the personalized study plan generated by MyPsychLab in response to students' Pre-Test results. Students were encouraged to take the chapter Post-Tests as many times as needed before the day of each online exam.

Professor Spaulding was surprised to find that not all students are as tech-savvy as she expected. However, as the semester progressed, she noted that some of the most timid students became proponents of MyPsychLab once they experienced the program. Professor Spaulding asserts, "We began to see a clear correlation between time spent in MyPsychLab and students' satisfaction with it. And more importantly, as students worked in MyPsychLab, we began to see them engaging with course concepts more deeply and asking substantive, informed questions during class discussions."

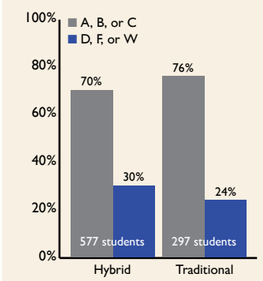
Effectiveness of Hybrid Format



ANALYSIS

The correlation between time spent in MyPsychLab and improved performance held up consistently even when high-achieving students were excluded from the data.

Grade Distribution



ANALYSIS

Negligible difference in grade distribution between the hybrid and traditional sections indicates that goal of equivalent learning experience in hybrid format was met.

Student Satisfaction

Students in all sections of the spring 2011 General Psychology were asked to complete a short survey on the effectiveness of MyPsychLab.

	Total students	Hybrid students	Traditional students
Number of students	531	332	199
MyPsychLab contributed to my success in the course?	55%	80%	12%
Would recommend MyPsychLab to friends/other students?	68%	78%	51%
Wish other Psychology professors used MyPsychLab?	66%	77%	47%
Prefer hybrid format to traditional more or much more?		64%	NA
MyPsychLab added to the value of this course—agree or strongly agree?		81%	NA

ANALYSIS

Students indicated a strong preference for the hybrid format using MyPsychLab and identified MyPsychLab as a key contributor to their success in the course.

Results

A total of 874 students were enrolled in the spring 2011 pilot course: 577 in the two hybrid sections and 297 in the traditional section. Professor Spaulding and her colleagues compared student performance and course satisfaction between the two formats.

Refining the approach

For the fall 2011 term, Professor Spaulding and her colleagues enacted several refinements.

- Student participation is now recorded with the use of clickers and counts toward students' final grade, improving attendance and participation in class discussions.
- Exams are identical for all sections of the class, paving the way for further analysis of student performance between hybrid and traditional sections.
- Part-time instructors, when needed, will be required to follow the course design Spaulding and her colleagues have created, eliminating the possibility of wide discrepancies in student experience that were an issue in the past.

Conclusion

"In our pilot of the hybrid course using MyPsychLab, we met our most important goals and we learned a number of things that have helped us refine our approach, laying the groundwork for continued improvement in student performance," states Professor Spaulding.

"First of all, we delivered an equivalent, or better, learning experience using MyPsychLab versus the traditional format. Comparing students' grades using MyPsychLab to students' grade results before MyPsychLab was implemented, we don't see a dramatic improvement in the numbers—yet. But we see a significant improvement in students' engagement, understanding, and participation with MyPsychLab. And that enthusiasm is mirrored in the experience we, as instructors, have had with MyPsychLab."

Spaulding continues, "In addition to the benefits for students and instructors, MyPsychLab has enabled us to save on classroom and teaching resources. In our pilot term, we were able to free up two 300-seat lecture halls, conducting four sections in the space previously used by two. We reduced our staffing from four paid graduate teaching assistants to one and added four undergraduate teaching assistants who earn course credit for their work."

myspanishlab ¡Hola!

CASE STUDY

Metropolitan State College
Denver, Colorado

INSTRUCTOR Dr. Lunden E. MacDonald, Assistant Professor of Spanish

COURSES SPA 1010 Intro to Spanish I
SPA 1020 Intro to Spanish II

LEVEL Elementary

TEXTS ¡Arriba!: Comunicación y cultura, 5/e, with MySpanishLab
by Eduardo Zayas-Bazán, Susan M. Bacon, and Holly Nibert

TERM COVERED Spring 2009

CONTRIBUTION OF MYSPANISHLAB TO FINAL GRADE 50%

TYPES OF DATA REPORTED Student performance

COURSE STRUCTURE Wired classroom

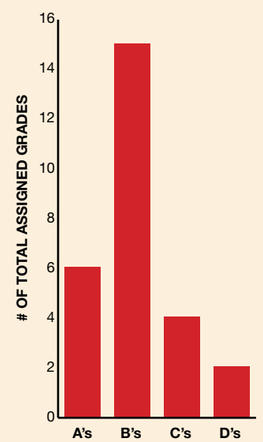
FOUNDED IN 1965, Metropolitan State College of Denver offers an affordable, quality education in a downtown setting to a large and diverse population. In keeping with Metro State's commitment to provide a relevant education with strong technology integration, Professor Lunden MacDonald coordinated a review of available online resources for the Modern Language department's introductory Spanish courses. In addition to improving student performance and equipping students with a suite of 21st century skills through more technology integration, the department hoped to:

- Ensure a uniform curriculum and testing platform for more than 1,000 introductory Spanish students annually
- Engage an automated grading system to relieve time-crunched faculty
- Enhance faculty's professional skills development by training them to teach using cutting-edge technology resources

The department determined that ¡Arriba! with MySpanishLab was the best fit for their students and began integrating MySpanishLab in Intro to Spanish I sections in fall 2008. In spring 2009, the department required MySpanishLab for all students in all sections of both Intro to Spanish I and Intro to Spanish II. MySpanishLab accounts for 50% of students' final grade. Readiness Checks, Student Activity Manual exercises, and Oral Practices are 15%; the mid-term exam is 10%; and the final exam is 15%.

> MySpanishLab has made for a noticeably higher level of communicative ability among my students.
>
> *—Dr. Lunden E. MacDonald*

Final Grade Distributions



Spring 2009 section of Spanish I using MySpanishLab. Average final grade for 27 students was 85

RESULTS

Instructors have responded very positively to MySpanishLab's automated grading and to the performance notification system that displays students' progress on MySpanishLab assignments. The performance notification system quickly displays overall course performance and individual student performance, allowing instructors to identify students who are struggling in the course. The automated grading saves instructors time that they can dedicate to engaging with students and helping them to stay on track.

Students' performance improved with MySpanishLab. "Grades were noticeably higher this semester with MySpanishLab," asserts Professor MacDonald. Professor MacDonald feels that MySpanishLab's SAM activities are a key contributor to students' higher grades. She says, "The machine-graded SAM activities force the students to keep up with their homework, whereas in prior semesters I noticed that students didn't even bother to do workbook activities. MySpanishLab's instant feedback really motivates students and makes their homework assignments meaningful. Students either understand the grammar concepts prior to class or they come to class with informed, intelligent questions due to the SAM practices." And, because less time in class is devoted to grammar review, says Professor MacDonald, "we are able to focus more on speaking and communicative practice. MySpanishLab has made for a noticeably higher level of communicative ability among my students."

In a representative section of Intro to Spanish I for which final grades were recorded in spring 2009, the average grade for 27 students was 85. Grade distribution was: A 6; B 15; C 4; D 2.

> "MySpanishLab provides **best-practice** technological support for instructors' pedagogical goals while effectively meeting the **varied learning needs** of students."
>
> *—Dr. Lunden E. MacDonald*

EXPANDING USE OF MYSPANISHLAB

Professor MacDonald is exploiting more of MySpanishLab's features in two accelerated summer courses (5 credits in just 5 weeks.) She reports, "These classes are normally delivered over 16 weeks. In the summer, it is not infrequent to have a quiz over a chapter on one day and then a big exam or midterm the next day. By doing SAMs and quizzes in MySpanishLab, I know that my students are getting the immediate feedback without having to wait a night for me to take the quiz home, grade it manually, etc. They can use the grading feedback immediately and we can maintain our extremely tight schedule."

Reflecting on the department's choice to integrate MySpanishLab, Professor MacDonald says, "MySpanishLab helps teachers teach better and students learn better! MySpanishLab provides best-practice technological support for instructors' pedagogical goals while effectively meeting the varied learning needs of students. We will absolutely continue to use MySpanishLab and incorporate it further and further into our daily instruction."

FUTURE

Looking ahead to fall, Professor MacDonald expects to continue expanding the use of MySpanishLab in the introductory courses and is reviewing MySpanishLab for use in a new pre-introductory course and for courses at the intermediate level as well. She reports that her colleagues teaching Italian have adopted MyItalianLab for their program and that the German faculty are eagerly awaiting MyGermanLab, currently in development.

MyWritingLab™

CASE STUDY

California State University, Bakersfield

Bakersfield, California

INSTRUCTORS Randi Brummett and Brooke Hughes

COURSES Developmental Reading and Writing, Composition, Intensive Writing Lab, Upper Division Writing Courses, Writing Across the Curriculum

TEXTS Assorted with MyWritingLab *(CSUB adopted MyWritingLabPlus in 2011.)*

TERMS COVERED 2005-present

CONTRIBUTION OF MYWRITINGLAB TO FINAL GRADE varies

TYPES OF DATA REPORTED Improvement in final course grades; Improvement in final course grades with increased usage of MyLab; Improvement in pass rates over quarters; Improvement in retention rates over quarters

COURSE STRUCTURE Online, hybrid

AT CALIFORNIA STATE UNIVERSITY, BAKERSFIELD, the typical student is a non-traditional student. The average age is 23, most students reside off-campus, and many students are balancing work and family responsibilities with their studies. In an enrollment of nearly 8,000 students, 38% are Hispanic American and, of those 3,000+ students, 73% are ESL or Generation 1.5. Nearly two-thirds of all freshmen admitted require English remediation. In an era of budget cuts, CSUB nevertheless seeks to become the leading university in the California State University system.

Instructors Randi Brummett and Brooke Hughes, based in the English department, began using MyWritingLab in 2005 after testing five programs from different publishers. (Brummett and Hughes changed to the MyWritingLabPlus platform in 2011.) Challenged by seriously constrained resources, Brummett and Hughes decided to reorganize their courses around an online learning resource in order to:

- deliver a consistent and high-quality learning experience for all students
- reliably track student learning outcomes
- address students' individual learning needs despite class sizes that exceeded optimal limits.

Students and instructors who participated in testing the five programs selected MyWritingLab for its capacity to fulfill the stated goals as well as for its:

- intuitive, easy-to-use navigation and features
- reasonable price
- diagnostic capabilities
- effectiveness at helping students progress from literal comprehension to internalization in their own writing.

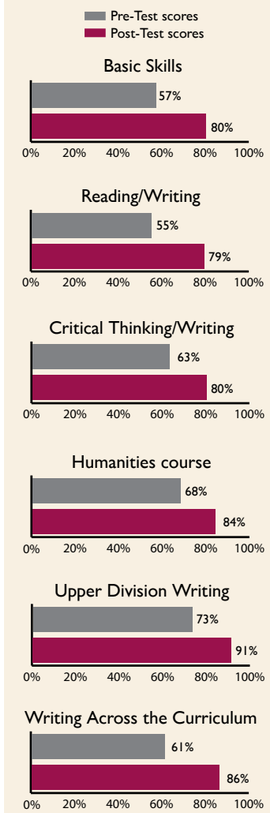
Teaching and learning with MyWritingLab

Instructors Brummett and Hughes began using MyWritingLab in four courses. In each case, strong student performance results and positive feedback from students and instructors led to an increased role for MyWritingLab over time. The MyWritingLab courses are:

"The student success alone is **remarkable** but we are also realizing significant cost savings for the university at the same time that we are accommodating more students—all as a **direct result** of our using MyWritingLab."

—Randi Brummett and Brooke Hughes

Pre-Test to Post-Test Comparison 2003-2010



ANALYSIS

Students improved average scores consistently across all levels.

BASIC SKILLS

A bridge course offered to qualified entering freshmen for four weeks (just 15 class meetings) in the summer

MyWritingLab was introduced in 2008 as a tutoring component. Course instructors were paired with MyWritingLab tutors who supported students' MyWritingLab work in the computer lab one or two days a week. Students using MyWritingLab improved an average 23 points from Pre-Test to Post-Test in just four weeks. In 2009, Brummett and Hughes replaced the traditional lecture format with MyWritingLab. In this intensive course, instructors support students' independent work, providing one-on-one instruction when needed.

READING AND WRITING

A developmental course

Beginning with one section in fall 2007, MyWritingLab was integrated into all sections by spring 2008. Initially taught in a hybrid format, with MyWritingLab as the grammar workshop component, the course was further reorganized so that students work online independently in MyWritingLab to fulfill the grammar component. Students using MyWritingLab consistently improve an average of 24 points from Pre-Test to Post-Test. Commented Brummett and Hughes, "MyWritingLab allows us to deploy precious instruction resources almost surgically, to one student at a time and at the moment that students express the need. MyWritingLab helps us to transform the challenge of limited faculty into a real positive for both students and instructors."

CRITICAL THINKING AND WRITING

A developmental course covering essay writing using rhetorical modes

MyWritingLab was introduced as a pilot in winter 2008 and soon integrated into all sections as a replacement for a mini-lecture component that had proved difficult for many non-resident students to attend. Instead, students work independently in MyWritingLab, achieving mastery of the required grammar topics at their own pace with support, when needed, from instructors. Students using MyWritingLab improve an average of 17 points from Pre-Test to Post-Test.

"Students were previously required to attend ten mini-lectures on grammar topics," Brummett and Hughes note, "but since they didn't find out about these mini-lectures until the first week of class, they often couldn't attend any of them due to schedule conflicts. Now, the students can do their grammar work on their own time, at their own pace."

MYWRITINGLABPLUS

A Humanities course offered to assist students with effective writing and grammar skills at any level. Students may elect to sign up or a faculty member may recommend students for the course.

Beginning in 2006, this course was organized around MyWritingLab in a fully online model. Students work independently on their MyWritingLab-generated personalized study plan with access to other resources, such as Pearson Tutor Services, offered through MyWritingLabPlus. Students using MyWritingLab in this Humanities course consistently record 16% mastery gains.

UPPER DIVISION WRITING

Writing-intensive courses varying in multiple disciplines at the Junior/Senior level

WRITING ACROSS THE CURRICULUM

Any courses and level outside of English, excluding upper division writing courses

Beginning in 2010, upper division writing and WAC courses began using MyWritingLabPlus. These courses use the program in a multitude of ways, varying

in choice of topics, mastery level, and workload. Students using MyWritingLabPlus in upper division writing courses average an 18% gain from Pre-Test to Post-Test. Students in WAC courses using MyWritingLabPlus experienced a gain of 25% from Pre-Test to Post-Test.

Expanding use of MyWritingLab

From a base of four courses, Brummett and Hughes have expanded the use of MyWritingLab at CSUB, partnering with departments across the university and customizing curricula to meet student and instructor needs. In addition to the original four English courses, MyWritingLab is now an optional component of Freshman Composition, and is used in the Graduate Studies Center. Currently, CSUB is using MyWritingLab in an innovative bridge program with two local high schools (one public, one private) to improve students' skills before they enter CSUB as freshmen. Instructors Brummett and Hughes are also sharing their MyWritingLab model and best practices with other schools, including Bakersfield College, CSU Fresno, Honolulu Community College, and Hannepin Technical College.

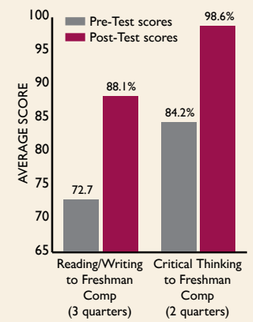
> "MyWritingLab has improved student performance by all the key measures: improved comprehension scores and final grades, improved retention, and more rapid progression from non-credit developmental courses to for-credit courses. And perhaps most importantly, with MyWritingLab, students are writing better papers."
>
> *—Randi Brummett and Brooke Hughes*

Brummett and Hughes report, "We work closely with faculty to track student performance results as well as qualitative measures of MyWritingLab's effectiveness. MyWritingLab has improved student performance by all the key measures: improved comprehension scores and final grades, improved retention, and more rapid progression from non-credit developmental courses to for-credit courses. Qualitatively, instructors report a great deal of satisfaction with MyWritingLab. Instructors can use class time more productively, can monitor students' progress more closely, and can provide immediate assistance when students need help. Students gain immeasurably by taking responsibility for their own learning process. And perhaps most importantly, with MyWritingLab, students are writing better papers."

MyWritingLabPlus now in use university-wide

In 2011, CSUB elected to adopt MyWritingLabPlus university-wide, giving students customized fee-based access to MyWritingLabPlus. All CSUB students have access to MyWritingLabPlus 100% of the time. Recently, a computer lab on campus was transformed into a MyWritingLabPlus Headquarters, staffed by paid undergraduates who are experienced MyWritingLabPlus users and who received an additional nine weeks of MyWritingLabPlus training. Any student may seek help with MyWritingLabPlus at the new Headquarters. The MyWritingLabPlus Headquarters also functions as a sister site to the Writing Resource Center. Brummett and Hughes explain, "If a student at the Writing Resource Center needs extra help on a topic or topics, he or she will receive a form and go to the MyWritingLabPlus Headquarters where those topics are unlocked for him or her and then checked off once mastered."

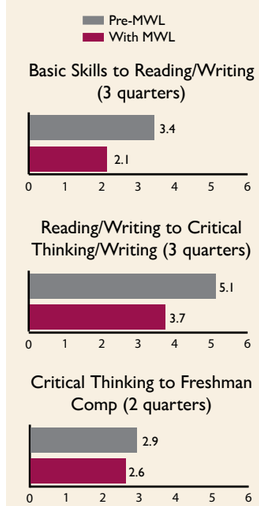
Average Retention (in %) of Students in English Courses 2003-2010



ANALYSIS

Retention rates improved significantly with the integration of MyWritingLab.

Average Length of Time (in Quarters) Students Spend in English Courses 2003-2010



ANALYSIS

Students progressed more rapidly from non-credit developmental courses to for-credit courses with the integration of MyWritingLab

MyWritingLab and Writing Across the Curriculum

Brummett and Hughes are partnering with faculty across the university to offer customized MyWritingLab support to students. Instructors can elect either of two models. They can have students sign up for the Humanities course or elect to incorporate a MyWritingLab component into their existing course. For instructors who choose the incorporated option, Brummett and Hughes train the instructor and assist him/her in creating a custom course in MyWritingLab for students. Many more faculty across campus are now involved with and trained in MyWritingLab. Brummett and Hughes explain, "More instructor involvement helps with time management, speeds up solutions when students reach roadblocks, and motivates both students and instructors. Some faculty members were initially reluctant to adopt a technology resource, but students loved MyWritingLab so much that instructors fed off students' enthusiasm and transitioned with ease."

Writing Across the Curriculum faculty evaluations of MyWritingLab:

HISTORY DEPARTMENT:

"This is just what my students needed in this course. The combination of MyWritingLab and PearsonTutor Services is invaluable."

GEOLOGY DEPARTMENT:

"Ever since my students enrolled in Humanities with MyWritingLab, their writing has improved, and it takes me less time to mark up their papers."

PUBLIC POLICY & ADMINISTRATION DEPARTMENT:

"It's been a long time since my students have had an English course. MyWritingLab is a good way for them to get that information quickly and painlessly."

BUSINESS DEPARTMENT:

"My students frequently would tell me how easy MyWritingLab was to use and how much they learned from it. I could definitely see an improvement in the first three weeks of them working in MyWritingLab."

Conclusion

"We began using MyWritingLab in the English department. Gradually we've expanded our focus, partnering with faculty in departments across the university from Music to Business, Chemistry to Social Work. We've trained 29% of CSUB faculty to use MyWritingLab and have experienced outstanding success in writing across the curriculum. The student success alone is remarkable but we are also realizing significant cost savings for the university at the same time that we are accommodating more students—all as a direct result of our using MyWritingLab."

—Randi Brummett and Brooke Hughes

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www.pearsonhighered.com/englishmylabs

For a product tour or to find out more, please visit www.mywritinglab.com

Pearson LearningStudio®

CASE STUDY

Iowa Community College Online Consortium (ICCOC)*

TERMS COVERED 2005-2010

TYPES OF DATA REPORTED Increased student success rate; Improved course completion rates

COURSE FORMAT Online

* Eastern Iowa Community College District (Clinton, Muscatine, and Scott); Iowa Lakes Community College; Iowa Western Community College; Northwest Iowa Community College; Southeastern Community College; Southwestern Community College; Western Iowa Tech Community College

THE IOWA COMMUNITY COLLEGE ONLINE CONSORTIUM (ICCOC) is comprised of seven Iowa community colleges that partner together to provide online education to their students. In 2005, 40 percent of ICCOC students were new to online learning and unfamiliar with the self-discipline needed to perform well in this environment. At that time, just 77 percent of at-risk students completed their courses, and only 57 percent got a "C" or higher.

To increase student success, the ICCOC set three main goals:

- Quickly identify at-risk students before students fail or drop out
- Provide support for students who need it
- Increase student success (achieving a "C" or higher) rates

To accomplish these goals, the ICCOC hired a Coordinator of Student Services tasked with developing an at-risk reporting strategy that would enhance the program's student retention and success. Additionally, this coordinator would provide learning preparation resources to new students and develop at-risk identification criteria to trigger intervention. However, with thousands of students across multiple campuses, a manual reporting and outreach program simply could not meet the need for rapid identification and response.

FINDING A SOLUTION WITH PEARSON

The Pearson LearningStudio Enterprise Reporting Suite provided the ICCOC with powerful, efficient tools for identifying at-risk students across all courses in the Consortium. Once the ICCOC had developed a reporting strategy, the Pearson LearningStudio Enterprise Reporting Suite delivered centrally located, web-based tools that provide enterprise-wide visibility of student activity and performance. Using Pearson LearningStudio, the Consortium offers more than 10 fully online degrees. In addition, ICCOC delivers more than 1,000 online course sections to more than 20,000 fully online enrollments each semester.

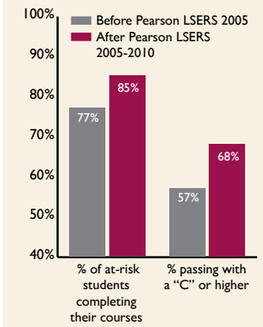
LEVERAGING DATA TO IMPROVE AT-RISK STUDENT SUCCESS

The Pearson LearningStudio Enterprise Reporting Suite data warehousing and business-intelligence packages are capable of discriminating and aggregating detailed levels of program data. For example, the Pearson LearningStudio Student Activity Report displayed the time individual students were spending within a specific course or across the program's entire offering — in weekly snapshots or over a considerable period of time. Inactive students, or those who hadn't logged into their courses, were labeled "at-risk" for failure and contacted immediately. The Pearson LearningStudio Enterprise Reporting Suite also provided detailed insights into specific student activity like discussion postings or assignment submission.

"The Pearson LearningStudio Enterprise Reporting Suite has evolved into an **efficient tool** which allows us to identify, track, and target **specific areas** for improvement."

—Steve Rheinschmidt, Director of the ICCOC

Completion and Grade Improvement with Pearson LearningStudio ERS



ANALYSIS

Pearson LearningStudio Enterprise Reporting Suite has helped ICCOC identify and intervene with at-risk students, significantly increasing both student success and completion rates.

The ICCOC used the Pearson LearningStudio Enterprise Reporting Suite to define students as "at-risk" if they had:

- Failed online courses in the previous two years
- Registered for three or more courses simultaneously
- Registered as first-time online students

The ICCOC also utilized a Pearson LearningStudio Enterprise Reporting Suite course-level communication tool that allows instructors to notify program administrators of at-risk behavior. The At-Risk Notification form is available in every ICCOC Pearson LearningStudio course, providing instructors with a roster of students, a list of reasons for concern and a text entry box for additional information.

With a more efficient data trending and reporting method, the ICCOC identified at-risk students earlier, allowing educators to intervene in time to put students back on track to achieving their academic goals.

RESULTS

The ICCOC increased its student success rate by 11 percent between 2005 and 2010. Students were considered "successful" if they completed an online course with a "C" or higher. During the same period, at-risk students' course completion rates saw an 8 percent improvement.

"The Pearson LearningStudio Enterprise Reporting Suite has evolved into an efficient tool which allows us to identify, track, and target specific areas for improvement," says Steve Rheinschmidt, Director of the ICCOC. "We can now proactively target our communication, professional development, and operational planning where they have the greatest potential for improving student success."

The ICCOC identified key guidelines that helped transform its online programs, including:

- Monitor and act on key performance indicators
- Provide students with consistent and clear-cut examples of success
- Set the optimal pace for each student to succeed by providing customized and appropriate learning paths guided by performance data
- Collect, provide feedback on, and score student success

CONCLUSION

As evidenced by five years of growth and improvement in at-risk student course completion and success rates at the ICCOC, the Pearson LearningStudio Enterprise Reporting Suite enhances the ability of institutions to rapidly identify at-risk students and to deploy the precise resources needed to help students succeed. The ICCOC continues to drive student success today by using Pearson LearningStudio Enterprise Reporting Suite to monitor and analyze trends in student performance.

PEARSON

www.pearsonhighered.com/mylabmastering

For a product tour or to find out more, please visit www.pearsonlearningstudio.com

smarthinking The leader in on-demand student support

Tallahassee Community College

"Smarthinking offers students first quality online feedback and support. It complements our on campus resources and extends our ability to support student learning from developmental studies through college level courses. Students can get help at the moment they need it – not just when the Learning Commons is open to provide it."

Sally Search, PhD
Dean, Academic Support Programs
Tallahassee Community College

Smarthinking – A Central Component of Student Success

Since 2002, Smarthinking has had a positive inpact on student success on and off campus.

Challenge

Tallahassee Community College (TCC) has a strong history of developing innovative approaches to help improve student success and persistence. In 2002, TCC was one of 30 schools to be awarded a prestigious Pew Program in Course Redesign grant to use technology to reduce course cost and enhance quality. TCC elected to redesign College Composition, a required course for all degree-seeking students, which at that time had pass rates of less than 60% annually.

In addition, TCC also struggled to provide tutoring services to students in courses that are typically hard to staff by face-to-face tutors and online enrollments were growing in all disciplines.

Profile

Institution Type:
Community College

Disciplines:
Writing, Science

Summary:
Founded in 1966, Tallahassee Community College (TCC) offers an associates degree or certificate program in over 80 disciplines on campus or online. TCC is consistently included in Community College Week's Top 100 Colleges for the number of associate degrees awarded. TCC's award-winning faculty support students in Leon, Gadsden and Wakulla counties.

Solution

TCC chose Smarthinking's Online Writing Lab to help redesign their College Composition course. At the end of the grant, the course redesign was considered a success, resulting in reduced course costs, while increasing writing proficiency and course pass rates.

The success of that initiative gave TCC faculty the impetus to petition for more funding to expand Smarthinking. Today, Smarthinking is a vital component of TCC's Learning Commons.

TCC also provides Smarthinking's online tutoring services to students in courses that are typically hard to staff by face-to-face tutors. Students taking courses in health education, chemistry, American history, freshman composition, psychology and physics, among others, have access to Smarthinking's 24/7 online tutoring.

Data collected by TCC shows (see table) that the more students access Smarthinking for assistance, the more successful they are in passing their class. These results support the continued use and growth of Smarthinking at TCC.

Spring 2011 Success Rates (based on # of Smarthinking Sessions)

Course	0 sessions	1 session	2+ sessions
Health Education	68%	85%	90%
Chemistry	60%	75%	76%
American Experience	65%	77%	78%
Argument & Persuasion	62%	83%	91%
Humanities	68%	50%	96%
Freshman Composition	68%	73%	91%
Developmental English	50%	76%	80%
General Psychology	50%	38%	61%

Learn More

To find out how Smarthinking can help you stay connected with your students, go to www.smarthinking.com or call toll-free 888.430.7429, ext. 4 so we can arrange a face-to-face appointment or live, online demonstration.

Sources: Sally Search, PhD, Dean, Academic Support Programs, Tallahassee Community College, 2011. Barbara Sloan, PhD, Provost and Vice President Academic Affairs, Tallahassee Community College, 2011.

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Smarthinking, Inc. | 888.430.7429, ext. 4 | info@smarthinking.com | www.smarthinking.com

smarthinking The leader in on-demand student support

Volunteer State Community College

"Smarthinking has proven to be a valuable addition to our student support services. The documented increase in course success by students using the Online Writing Lab demonstrates that this resource makes a positive impact on student achievement and a valuable investment of resources."

Jim Hiett
Interim Vice-President for Academic Affairs
Volunteer State Community College

Smarthinking Helps Improve Student Course Completion

Students using Smarthinking's Online Writing Lab were 8 times more likely to successfully complete their course.

Challenge

Volunteer State Community College is one of 13 community colleges in the State of Tennessee. Serving over 12,350 students, Vol State has a diverse student population, with a significant number of first-generation college students. Over 50% of incoming students are tested into Learning Support courses in math, writing and reading. With new state rules basing funding on student outcomes, Vol State recognized that rapid improvement in student success was needed. After researching a number of student support services, Vol State entered into a partnership with Smarthinking to help improve course completion and student achievement.

Profile

Institution Type:
Community College

Disciplines:
Writing

Summary:
Founded in 1971 and located in northern Middle Tennessee, Volunteer State Community College has over 12,350 students (2010-2011), with the most popular majors being university parallel (designed for transfer), pre-allied health, and business. Volunteer State Community College is SACS accredited.

Solution

In Spring 2010, Volunteer State Community College began a pilot program, offering Smarthinking to students in selected courses. Control groups were also selected to help measure the impact of Smarthinking's online tutoring. Although open to all students, a very small number of students initially used Smarthinking. Faculty decided to continue the pilot in the Fall of 2010, but narrowed the study to only those courses with a writing component. Students were required to submit specific writing assignments to Smarthinking's Online Writing Lab. Control sections were again used for comparison.

Results of the Fall 2010 pilot showed that Smarthinking users were 8 times more likely to successfully complete their courses than nonusers. Surveys showed that faculty and students valued Smarthinking and found it helpful.

Research into Smarthinking continued into the Spring 2011 semester with Smarthinking open to all students. Results showed that students increased their use of Smarthinking, with 86% of those students using Smarthinking's Online Writing Lab. In a survey measuring user satisfaction, 94% of students said Smarthinking was "very easy" or "easy" to use and 88% said it was helpful. Seventy percent (70%) of faculty respondents found Smarthinking "very useful" or "useful."

Volunteer State Community College intends to continue to offer Smarthinking to all students, concluding that Smarthinking is "a useful tool that increases our students' chances of success."

Learn More

To find out how Smarthinking can help you stay connected with your students, go to www.smarthinking.com or call toll-free 888.430.7429, ext. 4 so we can arrange a face-to-face appointment or live, online demonstration.

Sources: Jim Hiett, Interim Vice- President for Academic Affairs, "Helping Students On and Off Campus with 24/7 Online Tutoring", Presentation at STEMtech Conference on Oct. 3, 2011 in Indianapolis, IN.

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MyLab / Mastering Standards for Efficacy Research

What Pearson means by the terms "efficacy" and "effectiveness."

- "Efficacy" describes whether a product or intervention has a positive effect on learning, such as reducing wrong answers, increasing retention rates, or raising final exam scores.
- "Effectiveness" measures the size of the educational improvement from a product or educational intervention.

Why Pearson is interested in efficacy studies.

To deliver the best educational experience for students, we need to understand how Pearson's content is performing and verify learning gains associated with the use of our products. Toward that goal, we actively seek out educators who wish to explore educational research questions and investigate the efficacy of MyLab / Mastering products.

Who is Pearson's efficacy research team?

Our research team includes Ph.D. level statisticians who provide practical advice about tracking and analyzing student data when redesigning a course to incorporate technology. Our research team also includes experts in psychometrics, educational statistics, and journal publications. These individuals support instructors who want to run an efficacy study; provide our editorial staff with detailed reports on the quality of our online content; and advise our software engineers of new methodologies for collecting and processing student learning data within MyLab / Mastering.

Some Common Study Designs

Observational	Historical	Longitudinal	Experimental	Retrospective
Teacher's observations	Teacher's comparison of learning intervention (e.g., MyLab) to prior year(s) without intervention	Teacher's tracking of students' performance in subsequent course(s)	Teacher randomly divides students into two groups: control and experimental	Teacher reviews prior year(s) data in a scientific manner to shed light on learning outcomes
Anecdotal or Rigorous	Anecdotal or Rigorous	Rigorous (requires large sample size)*	Rigorous (requires large sample size)	Rigorous (requires large sample size)
Qualitative and/or Quantitative data	Qualitative and/or Quantitative data	Qualitative and Quantitative data	Qualitative and Quantitative data	Qualitative and Quantitative data
Publications: • Success Stories • Case Studies • Video Interviews • Surveys	**Publications:** • Case Studies • Conference Proceedings • Journal Articles	**Publications:** • Case Studies • Conference Proceedings • Journal Articles	**Publications:** • Case Studies • Conference Proceedings • Journal Articles	**Publications:** • Case Studies • Conference Proceedings • Journal Articles
Challenges: None or few challenges in this type of study	**Challenges:** • Obtaining access to equivalent and comparable data (same final exam) • Too many variations between years (different teachers, books, programs, etc.) • Obtaining benchmark data (for example, were both sets of student groups similar?) • Administrative hurdles	**Challenges:** • See Historical challenges • Obtaining access to data in subsequent classes, if taught by different personnel	**Challenges:** • See Historical challenges • Ethical hurdles (obtaining clearance from Institutional Review Board to experiment on students)	**Challenges:** • See Historical challenges

*In general, sample size is encouraged to be approximately 100 for college classes and 50 for K–12 classes, but we will accept and consider smaller sample sizes.

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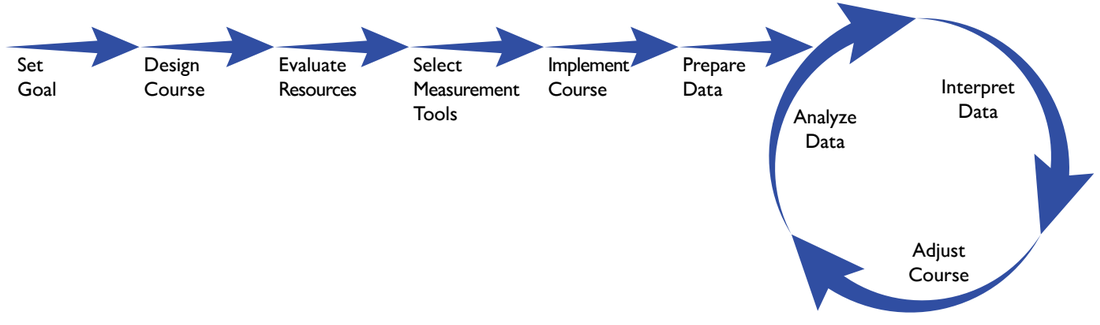
Pearson Standards for Efficacy Research

How Pearson and instructors work together.

Every research project is unique. The process takes time—generally a semester or longer. Below is a typical flow chart of the process.



How Pearson can help instructors get started.

Pearson can provide templates, guidelines, checklists, and samples on course redesign, efficacy studies, data collection, and more. In order to maintain objectivity, Pearson does not pay for data or participation in efficacy studies.

Research Standards

Pearson adheres to the SIIA guidelines for evaluating educational technology products.

The key guidelines are:

- Ask the Right Question
- Support the Implementation of the Product or Service
- Plan a Study of Sufficient Size and Duration to Demonstrate an Effect
- Plan for Plausible Causal Claims
- Avoid (the Appearance of) Conflicts of Interest
- Provide a Comprehensive and Detailed Research Report
- Make the Research Findings Widely Available
- Accurately Translate Research for Customers

Contact your Pearson Representative for more information.

ALWAYS LEARNING PEARSON

NOTES

What are students saying?

MyMathLab®

" Previously, in my traditional lecture math course, I struggled. The redesign program both increased my grades and increased my motivation and self-confidence around math."

—Student, *Wilbur Wright College, City Colleges of Chicago (IL)*, page 23

" I am a college student returning to school 32 years after receiving a bachelor's degree. MyMathLab…was essential to my successful completion of this course."

—Student, *Brookhaven College (TX)*, page 19

MyPoliSciLab®

" I have learned a lot this semester. I have registered to vote for the upcoming election in November. I received a 92% on my 'Citizenship test' in MyPoliSciLab – a lot better grade than when I took it at the start of the term.

—Student, *Delaware Technical and Community College (DE)*

MasteringBiology®

" Use the MasteringBiology website…it makes the class so much more awesome."

—Student, *Collin College (TX)*, page 7

More Evidence of Student Success

More than 10 million students used Pearson MyLab/Mastering in 2012. Integrated usage of these programs has been shown to provide measurable gains in student retention, subsequent success, and overall achievement.

Find out more at
www.pearsonhighered.com/educator/mylabmastering/proven-results/index.page

Inside this report are case studies about:

- LearningStudio®
- MasteringAstronomy®
- MasteringBiology®
- MasteringChemistry®
- MasteringEngineering®
- MyAccountingLab®
- MyEconLab®
- MyFoundationsLab®
- MyITLab®
- MyMathLab®
- MyMathLabPlus®
- MyPsychLab®
- MySkillsLab®
- MySpanishLab®
- Smarthinking™