BREAKTHROUGH

To improving results

MyLab & Mastering
10 Best Practices

September 2013

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INTRODUCTION

A large body of evidence demonstrates that technology-enhanced instruction can both increase student learning outcomes and lead to efficiencies in costs and other resources. Alongside that evidence is growing demand to identify best practices in the implementation of such learning technologies so as to achieve the results that students, educators, and institutions seek. Our experience—which spans thousands of institutions, tens of thousands of educators, and millions of students—has shown that **the *way* educators integrate a learning technology is the single, most significant element that affects resultant outcomes.**

To promote the effective integration of digital resources, we have drawn from a vast collection of successful learning-technology implementations—specifically, Pearson's MyLab & Mastering products—to determine and share the practices that have consistently yielded improved outcomes. This report discusses those recommended best practices and gives examples and anecdotes from a wide range of disciplines, institution types, and course delivery methods.

Whether you're a faculty member with a single section, or the coordinator of a large-enrollment, multisection course, or a department chair or administrator seeking ways to improve outcomes with shrinking resources, **if you have a vested interest in student success, this report is for you.** Consider it your personal, accessible reference guide to the field's most-effective technology implementation practices.

You will see references to the expression *course redesign* in this report, and we acknowledge that that term might not be a familiar one. Typically used for describing a formal rethinking of instruction delivery in large-enrollment, core courses with the goals of improving outcomes and reducing costs, course redesign can take many shapes: On one end of the continuum, it can reflect one instructor's modification of a course to shift instruction online so as to enable more interactive learning during class. On the other end, course redesign can represent department-wide, institution-wide, or even statewide changes. You'll find examples of each of them in this report. But regardless of where you see yourself and your institution along that spectrum, you'll find relevant ideas in this report.

> See the case studies included in this report, as well as hundreds of others and their outcomes, in the
> **MyLab & Mastering Results Gallery**
> *www.pearsonmylabandmastering.com/results*

Every case study in the report was submitted voluntarily and without compensation to the contributors, to whom we extend our deepest gratitude. Their dedication to their students' learning is invaluable.

We look forward to hearing about your achievements and to including your results in the next MyLab & Mastering report. To submit your successes for publication, contact Brian Buckley, program manager for efficacy research, at brian.buckley@pearson.com.

Pearson's efficacy research team is available to support educators with advice about tracking and analyzing data and effectively incorporating technology into courses. Pearson provides templates, guidelines, checklists, and more to help faculty develop their studies.

Efficacy Reports

This report is about best practices and, as such, does not include the full breadth of implementation details and data for each case study cited. You can find complete case studies, including profiles, student outcomes data, student survey data, and student and instructor quotes, in the below-listed efficacy reports.

Contact your Pearson representative to obtain a print copy of any of these reports, or download a version from the MyLab & Mastering Results Gallery: www.pearsonmylabandmastering.com/results.

- 16 Proven Ways to Help Your Course Redesign Succeed *(math)*
- Raising the Bar, V.3 *(multidiscipline)*
- Making the Grade, V.5 *(math and statistics)*
- MyLab & Mastering: Business
- MyLab & Mastering: English
- MyLab & Mastering: Humanities and Social Sciences
- MyLab & Mastering: IT
- MyLab & Mastering: Science and Engineering, V.3
- MyLab & Mastering: World Languages

BEST PRACTICES

Simply adding any technology product to your course won't guarantee instant resolution of your institution's teaching and learning challenges. But adoption of the best practices described in the following pages in concert with a MyLab or Mastering implementation has shown repeatedly to yield positive results that both continue through the course sequence and remain sustainable over time.

1 Identify the problems you want to solve.

After examining the most successful MyLab & Mastering implementations, one thing is consistent: those schools that achieve success know precisely where they stand, they establish clear goals at the onset and then specifically design their implementations to reach them. Whether you're considering a single-course adoption or exploring the viability of a full departmental redesign, your first step is to identify the problems you want to solve. The clearer you are about why you want to adopt a MyLab & Mastering product, the more likely you'll be to successfully address those issues. When it comes time to measure outcomes, you'll know exactly how far you've come and what areas still need work.

Be sure to include the concerns of everyone involved— teaching assistants, adjunct professors, other faculty, and your department chair. Including as many stakeholders early in the process will go a long way to ensuring effective collaboration down the road.

Most schools want to see the following improvements:

- Accelerated student completion of the developmental sequence
- Creation of online or blended course options
- Increased student success rates
- Enhanced ability to serve more students with fewer resources
- Reduction in institutional cost-per-student expenses

Example *Kentucky Community & Technical College System: MyMathLab, MyReadingLab, MyWritingLab*

In March 2009, Kentucky legislators passed Senate Bill 1, which required higher education institutions to accelerate the progress of students in developmental programs for reading, writing, and math, in order to more quickly prepare them for the college-level courses they need to complete degree, certificate, and training programs and enter the workforce. Legislators set a goal to enroll 50 percent fewer students in developmental classes by 2014. To meet this goal, KCTCS redesigned its college readiness courses for an online-learning environment.

"An increasing number of degree-seeking students are now mastering college readiness competencies and completing college-level courses. As a result, more students are receiving the degrees and certificates they need to pursue their dreams."

—Submitted by Etta Cantrell, Professor

Example   *Carroll Community College: 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 percent of students dropped or failed Principles of Accounting 1, compared to a college average of 16 percent.

Within the first year, the drop/fail rate decreased 11 percentage points—from 34 percent to 23 percent, and the A/B rate increased 12 percentage points—from 37 percent to 49 percent. Based on the successful redesign of the Principles sequence, MyAccountingLab is now in use for cost accounting, auditing, and tax classes.

—Submitted by Kate Demarest, Professor

Example   *Walters State: MasteringA&P*

Many anatomy & physiology students were struggling. Faculty discovered a variety of contributing factors, including poor time management, lack of study skills, no course prerequisites, and an increase in nontraditional students who hadn't been in a classroom in recent years. The department sought to increase student preparedness, exposure to and engagement with course materials, retention, and student success.

"After my first semester using MasteringA&P, A&P II showed an increase in As, Bs, and Cs, and a decrease in the D/F/W rate. In both A&P I and II, students showed significant, positive increases in their final exam scores."

—Submitted by Abigail Goosie, Professor

"We knew we had a problem, and we started actively looking for a solution."

—Professor Kate Demarest
Carroll Community College

LEARN FROM YOUR PEERS

Many schools begin the process by examining the models and programs already in place at other institutions. Pearson's Faculty Advisor Network is an online community for educators teaching with Pearson MyLab & Mastering who are both passionate and willing to share experiences, tips, advice, and best practices. Join the FAN community by visiting community.pearson.com/fan/.

2 Choose the learning technology, text, and method of delivery that best fit your goals.

- Is there sufficient evidence available that the materials are effective?

- Will it be used in face-to-face classes? in blended (hybrid) classes? in a lab setting? or in classes that are completely online?

- Does it assess student learning based on performance of assigned objectives?

- Does it assist students in remediation of areas in which an objective is not met?

- Does the provider offer technical support for instructors, students, and campus IT administrators? Is there *dedicated* technical support for each of those user groups?

- For the supervision of sections taught by part-time or adjunct instructors, will the software ensure consistency of instruction?

www.pearsonhighered.com/courseredesign/get-started/choose-a-product/index.html

Experienced faculty point to high-quality, inter-active learning materials as catalysts for greater student engagement with course content, with each other, and with instructors, thereby helping improve student learning. After you've analyzed your students' needs, your needs, and your present resources, you're ready to choose the method and teaching materials that best fit your unique configuration and support your stated goals.

MyLab & Mastering enable educators to make changes both within a classroom and across multiple sections. Educators can also supplement course materials with their original content or a broad range of Pearson content.

Example   *University of Rhode Island: MyItalianLab*

Instructors at the University of Rhode Island consulted with the Italian language coordinator about changing materials for the Basic Italian courses. Specifically, the professors sought a more communicative approach, an emphasis on culture, and online access to all course materials. They chose the Percorsi text and MyItalianLab because these materials offered a contemporary, communicative approach to Italian language study that aligned with their goals.

"All of our students showed improvement but the effect was greatest for those students who did their MyItalianLab assignments every day."

—Submitted by Gazerro Hanson, Professor

Example   *Missouri University of Science and Technology: MasteringChemistry*

General Chemistry I was a traditional lecture and recitation course taught on campus. In spring 2012, the school changed the format such that all of the testing and homework was completed online using MasteringChemistry. MasteringChemistry has not changed the school's approach with respect to lecture or recitation; it has, however, increased student engagement outside of class.

There was a considerable increase in perfor-mance on the post-assessment from the fall 2011 traditional course (mean=70.93%) to the fall 2012 redesigned course (mean=80.39%). A preparedness test developed by faculty was administered to all students as a pretest. Students in the redesigned course were less prepared (mean score=68.56%) than students in the traditional course (mean score=74.70%), making the learning increase in the redesigned course even more impressive.

—Submitted by Klaus Woelk, Associate Professor, Emmalou T. Satterfield, Professor, and Dan Cernusca, Assistant Professor

3 Build an assessment plan.

Decide who will be responsible for tracking data, measuring results, and documenting observations regarding learning gains. Baseline data for the course in its traditional format can facilitate before-and-after comparisons of student learning outcomes.

Schools that embark on full course redesigns will also address common assessments. A benefit of the redesign model is its emphasis on course consistency so that students are assessed on common outcomes via common methods. Students in traditional courses may be assessed in any number of ways—even within the same department—which can lead to content and grading differences, grade inflation, and a lack of data integrity.

Example   *Grand View University: MyHistoryLab*

By thoroughly integrating use of MyHistoryLab into course assessments, Professor Kevin Gannon ensured that his course objectives and his classroom practice were consistent.

"Students come to class mentally prepared and my classroom is now a much more active learning environment. Student participation—in both online and class discussions—is near 100 percent."

—Submitted by Kevin Gannon, Professor and History Department Chair

Example   *Lincoln University: MySkillsLab*

In order to assess the impact of the redesign on student learning, all sections of Lincoln University's traditional and redesigned Basic English course were given a pretest and posttest in two parts: a locally designed reading and writing test scored with a rubric, and the computerized diagnostic grammar, mechanics, and reading comprehension pretests and posttests in MySkillsLab. Future plans include gathering longitudinal data on retention rates, GPAs, and college-level English course grades in both the traditional and redesigned formats.

—Submitted by Christina Holzhauser, Instructor

TIP FROM THE FIELD

How can I get others excited about implementing a MyLab & Mastering product?

- Ensure that your decisions are data driven. If you don't have data, ask faculty if current outcomes are acceptable.

- Identify one or two receptive faculty members and then have them become the champions with other faculty members and spread the word.

- Explain to faculty that the current design is changing in order to deliver better outcomes to students and requires their contributions to succeed.

4 Get everyone—and keep everyone—on the same page.

"**A collective commitment** *is a key factor in the success and the sustainability of redesign projects.*"

—Carol Twigg, President and CEO
National Center for Academic Transformation

"The secret is to gang up on the problem, **rather than each other.**"

—Thomas Stallkamp

All redesigns and many implementations require educators to work collaboratively. The fact is if every faculty member is not on board, handing in grades, and actively participating, the integrity of your implementation will be compromised.

For many, working in a group is the most challenging part of an implementation or redesign. Be patient and help others adjust to the idea that decisions should be made collaboratively; everyone must follow the same rules and guidelines. Once the implementation is up and running, weekly meetings and the mentoring of part-time faculty, adjuncts, and tutors will go a long way toward retaining team harmony and ensuring that all faculty and staff are implementing redesign decisions consistently. Pearson provides product and implementation training to ensure all faculty are in agreement regarding goals, execution, and working in a group.

Pearson Faculty Advisors recommend these additional strategies:

- *Recruit a mentor.* Consultations with administrators and the gathering of successful data from other schools can help a lot. Stay focused on the problems that prompted your adoption, and consider contacting others who have embarked on similar projects.

- *Be supportive and communicative.* Be a cheerleader and actively work to develop a sense of team enthusiasm around the initiative.

Example *Eastern Gateway Community College: MyWritingLab*

Developmental studies faculty consulted with English faculty to ensure the new course sequence would prepare students for a smooth transition to English Composition 101. They created a common syllabus, implemented MyWritingLab so that students had a unified, consistent learning environment, and maintained the cross-departmental communication.

Student performance improved dramatically. Passing rates increased from 63.9 percent to 82.7 percent, and failure rates declined from 31.3 percent to 12.9 percent.

—Submitted by Dawn Cable, Instructor

Example *St. Petersburg College: MyReadingLab, MyWritingLab*

Implementation goals included advising students throughout the process and supporting the professional development of faculty as they gained expertise with the redesign model.

Students in the redesigned courses passed in higher numbers, had stronger retention, and moved on swiftly to Composition I versus the students in the standard courses.

—Submitted by Martha Campbell, Dean

5 Start small.

The most successful implementations enable both students and faculty to ease into the new format. In this way, initial problems get worked out on a small scale before expanding to the entire course, across all sections, or throughout the department. Consider one of the following approaches:

- Pilot your MyLab & Mastering product in a small section or during the summer before conducting a full-scale implementation.

- Approach your implementation progressively. Use only selected aspects of your learning technology to start; when you're comfortable, slowly add more features.

- Slowly integrate the MyLab & Mastering product into your course. Start with required homework. When you're ready, add the program's diagnostic, adaptive learning, and assessment features. Some of our most experienced users are still finding new, more effective, and more targeted ways to get the most out of their implementations.

Example St. Petersburg College: MyReadingLab, MyWritingLab

"We adopted MyWritinglab and MyReadinglab for the redesigned Basic Writing II and Reading Techniques II courses, respectively. We launched in spring 2011 on five campuses with 200 students (15 students max per section) so that we could closely monitor students' progress and make adjustments if necessary. Both courses were transitioned from 16-week, 4-credit hour courses with 22 students per section in online, hybrid, and traditional formats to accelerated 8-week, 2-credit hour courses meeting in computer labs twice a week with no more than 15 students per section. For the 2011–12 academic year, we opened up enrollment to a total of 328 students in Basic Writing II (37 sections) and 294 students in reading techniques II (34 sections).

By tracking students in Basic Writing II from spring 2011 to spring 2012, we found that 72 percent passed the course on first or second attempt and 63 percent completed and passed Composition I by spring 2012. This is a significant improvement."

—Submitted by Martha Campbell, Dean

Example Rochester Institute of Technology: MasteringBiology

In academic year 2009/10, the first year that she used MasteringBiology in General Biology II, Professor Sandi Connelly provided optional practice assignments for extra credit. Starting in fall 2010, she assigned 5 to 8 MasteringBiology assignments, which accounted for 5 percent of the students' final course grade. According to Professor Connelly, when she noticed the impact MasteringBiology was having on student learning, she required more of its use, including one MasteringBiology homework assignment each week. She increased the weight of the assignments to 15 percent of the final course grade in 2011, and to 25 percent in fall 2012. In addition, up to 25 percent of the exam questions are pulled from the MasteringBiology Study Area.

Steadily increasing the use of MasteringBiology enabled more active learning opportunities and resulted in a six to eight percentage point increase in exam grades—a significant difference in a student's final course grade.

—Submitted by Sandra J. Connelly, Assistant Professor

6 Position students for success.

When it comes to positioning students for success, Pearson Faculty Advisors are our experts.
We asked them to share their most important curricular and pedagogical takeaways, drawn from both their personal experience and from their experience helping other educators. The result is the following proven-effective advice.

- *Conduct a first-day-of-class orientation.* Pearson's customized getting-started materials, presentations, handouts, and email templates help students understand the value of course materials and the connection between learning the course objectives and successful completion of the course. Find out how to obtain materials for your course at www.firstdayofclass.com.

- *Provide structure.* The more structure you provide, the more success students will have. This includes the presentation of clear expectations and the setting of firm and consistent deadlines.

- *Require attendance.* Required attendance or participation is critical to the success of both your redesign and your students.

- *Employ mastery learning.* Students who advance without full competence in skills are doomed to struggle—if not fail. Mastery learning ensures that skills are solidly understood and that they build one upon another, thereby reinforcing previous knowledge and increasing confidence. Schools that employ mastery learning invariably find that students both complete more work and learn more than students in traditional formats.

Example *Louisiana State University: MyMathLab*

Louisiana State University's redesign model requires students to spend one hour a week in a traditional classroom of 40 students and a minimum of three flexible hours a week using Trigsted MyMathLab in a math lab. In addition to putting in the minimum required hours in the learning lab, students are encouraged to work additional hours in the lab or work at their convenience from a Web-accessible computer.

"Not only has the percentage of students earning As and Bs increased, the success rate of those students in their subsequent courses has also increased. For those students who earned an A or B in College Algebra, the success rate in the subsequent course (Trigonometry or Business Calculus) within three semesters increased six percentage points. Trigonometry and Business Calculus are STEM courses—exactly the courses we're trying to prepare students for. By increasing the number of students who can earn an A or B in College Algebra, we have directly increased their chances at success later in their college career."

—Submitted by Phoebe Rouse, Precalculus Mathematics Director

CLOSING THE GAP

According to a 2013 presentation by NCAT Redesign Scholar John Squires, three key elements close the educational gap for traditionally low-achieving students:

- Engagement in course material
- Early intervention
- Mastery learning

IT WORKS!

Cleveland State Community College Redesign: Tennessee Board of Regents studies found that gender and race were no longer factors in predicting course success; achievement gaps had been closed.

Chattanooga State Community College Redesign: Low-income students were tracked and compared with all students in terms of course success, accelerated learning, and fall-to-spring retention. No gaps were found: low-income students performed as well as other students across the board and in all areas.

7 Connect and engage with students.

Faculty involved in both MyLab & Mastering implementations and course redesign initiatives are unanimous about the importance of individually connecting with students inside and outside class. In class, these faculty recommend not waiting for students to ask questions. Rather, they suggest circulating in the classroom or lab space and employing a system of signals to avoid student embarrassment for speaking up. Outside class, some faculty send weekly emails containing kudos to those doing well and offering support and intervention to those having trouble, not completing their work, or otherwise absent from class.

Try these tips from some of Pearson's Faculty Advisors:

- Offer points for everything.
- Offer self-acceleration options.
- Have students respond to one another and share ideas.
- Get information to them as early as possible.
- Add the following to your signature line: "Remember: YOU determine your grade."

Example   *University of North Carolina at Greensboro: MyITLab*

Lecturer Maurie Lockley uses MyITLab to stay connected to her students. She uses the Identify Inactive Students feature to see what's happening with her entire class, then reaches out to inactive students. Some respond with, "It's OK. I worked ahead and finished all my work." But sometimes a student really is in trouble and Lockley is able convey that she cares and get the student back on track before the student falls too far behind.

"The retention rate in my course increased from 70 percent to 81 percent, and increased in the subsequent course from 50 percent to 80 percent. In addition, since adopting MyITLab we're able to cover more academic ground each semester. Students master more skills faster than ever before."

—Submitted by Maurie Lockley, Lecturer

"I've helped put more computers in more schools than anybody else in the world and I'm absolutely convinced that technology is by no means the most important thing. **The most important thing is a person."**

—Steve Jobs

8 Employ personalized and adaptive learning.
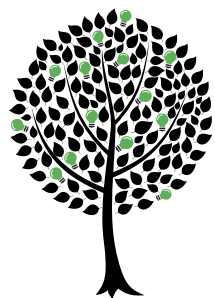
Personalized learning is frequently applied with other best practices, including mastery learning and frequent assessments. This kind of intelligent integration of practices can quickly make a good implementation even better.

Across disciplines and for all academic skill levels, the most successful teaching and learning solutions include personalization and adaptive learning technology that provide immediate feedback and enhance and inform assessment.

MyLab & Mastering products adapt content to meet the unique needs of each student. Our platform analyzes learning materials based on thousands of data points—including prerequisite relationships, conceptual challenge, difficulty level, and media format—and uses sophisticated algorithms to identify student strengths, weaknesses, knowledge gaps, and learning styles.

Students can complete assessments at their own speed and, via diagnostics performed along the way, can follow a personalized learning path that both targets the exact skills they need to work on and delivers the right material they need to master those skills.

Example   *University of Ottawa: MasteringChemistry*

Increasing class sizes make it impossible for Lecturer Kathy-Sarah Focsaneanu to have meaningful one-on-one contact with every single student. For her, the most beneficial aspect of MasteringChemistry is its tutorial nature—students can read, practice course problems, and seek help via hints when they are struggling. According to Focsaneanu, it's as close as a computer program can get to her sitting beside her students while they're studying.

"In analyzing data from fall 2011, when I had assigned both MasteringChemistry homework and a timed MasteringChemistry quiz prior to each midterm, I found a seven percentage point increase in success rates and a decrease in Ds, Es, Fs, and incompletes. In addition, there was a strong correlation between MasteringChemistry grades and final course grades."

—*Submitted by Kathy-Sarah Focsaneanu, Lecturer*

Example   *Miami Dade College: MyFoundationsLab*

Students enjoy working with MyFoundationsLab and, as a result, progress more quickly. They are engaged and motivated by the personalized modular instruction that is geared towards their academic needs.

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

—*Submitted by David Heredia, Associate Professor*

9 Conduct frequent assessments.

Educators have long recognized the necessity of assessment as both a measurement of how well students are learning and a tool for critical feedback.

- **"Assessment and feedback are crucial for helping people learn.** Assessment should mirror good instruction; happen continuously as part of instruction; and provide information about the levels of understanding that students are reaching. In order for learners to gain insight into their learning and their understanding, frequent feedback is critical: students need to monitor their learning and actively evaluate their strategies and their current levels of understanding." (*How People Learn;* Bransford, Brown, and Cocking, 1999)

- **"Individuals acquire a skill much more rapidly if they receive feedback about the correctness of what they have done.** One of the most important roles for assessment is the provision of timely and informative feedback to students during instruction and learning so that their practice of a skill and its subsequent acquisition will be effective and efficient." (*Knowing What Students Know: The Science and Design of Educational Assessment;* Pellegrino, Chudowsky, and Glaser, 2001)

MyLab & Mastering implementations enable educators to exponentially increase the power of assessment by increasing the *number* of assessments, thereby offering students a firsthand account of what they know and what they do not know and providing educators more opportunities to intervene before a student falls too far behind. When frequent assessments combine with the best practices of personalized and mastery learning, an implementation's capacity to increase (1) student comprehension of course material and (2) student learning gains throughout the course sequence escalate—there are no limits.

Example *Eastern Gateway Community College: MyWritingLab*

MyWritingLab's individualized study plan enables students to pace themselves and to work only on the specific skills they need to master. Students receive immediate feedback and have multiple chances to master the material. And because MyWritingLab provides ample chances to succeed, students have little risk of failing. On the contrary, they can complete the course ahead of schedule.

Student performance improved dramatically. Passing rates increased from 63.9 percent to 82.7 percent; failure rates declined from 31.3 percent to 12.9 percent.

—Submitted by Dawn Cable, Instructor

TIP FROM THE FIELD

The below assessment plan from University of Central Florida represents an effective model of frequency of assessments and significant weight for MyLab & Mastering product usage.

Contribution to Course Grade	Assessment
45 percent	MyMathLab tests (three) *Completed in a dedicated testing lab*
30 percent	MyMathLab final exam *Completed in a dedicated testing lab*
10 percent	Participation
8 percent	MyMathLab quizzes (Weekly) *Up to seven attempts*
7 percent	MyMathLab homework (Weekly) *Must attain at least 70 percent mastery to take associated quiz*

10 Track learning gains.

What you don't track you can't measure. And what you haven't measured you can't prove has happened. Faculty who consistently track and measure learning gains are able to make informed decisions about programmatic shifts and can increase their abilities to demonstrate institutional effectiveness, meet accreditation standards, track quality-enhancement plans, and fulfill grant requirements.

Pertinent metrics might include comparisons of homework grades, exam scores, and final grades with those of past semesters; correlation between time spent and final grades; subsequent success rates; retention rates; and the effectiveness of using the text in tandem with the online product.

Grade Inconsistencies
Once you've gathered enough data to compare current outcomes with those from previous terms, you may discover that pass rates from the traditional format had been inflated by inconsistencies in grading practices.

Carol Twigg, president and CEO of the National Center for Academic Transformation, suggests the following to avoid grade inflation in traditional courses:

• Require that students pass the final exam in order to pass the course

• Create clear guidelines regarding partial credit

• Establish common standards for topic coverage

• Provide training and oversight for part-time educators

Also, bear in mind that technology-enabled courses are frequently more difficult than traditional courses due to having more assignments, more quizzes, and more tests than do traditional courses.

Example *Rochester Institute of Technology: MasteringBiology*

To learn how MasteringBiology facilitates student learning, Professor Sandi Connelly evaluated the results of two exams: plant physiology and animal anatomy—often the most predictive of the students' final performance for the second course in general biology, and which include concepts that are built upon in the third course.

"I discovered that exam grades increased six to eight percentage points when I required MasteringBiology assignments, increased the value applied to them, and included the program's Study Area content on the exams."

—Submitted by Sandra J. Connelly, Assistant Professor

Example *Arkansas State University: MyArtsLab*

Because she tracked her students' learning outcomes, Associate Professor Alyson Gill was able to demonstrate that her students' performance improved by a full letter grade after she implemented MyArtsLab. She also tracked and compared exam grades and student comments from class sections that used MyArtsLab to sections that did not.

"Overall, grades in my classes since I adopted MyArtsLab have increased by a letter grade—a very significant improvement. We also found that students who completed the MyArtsLab pre- and posttests prior to exams had a stronger grasp of the material, wrote longer, more fully developed essays, and performed better on exams.

—Submitted by Alyson Gill, Professor

BUILDING SUCCESS

SUBSEQUENT SUCCESS RATES

Institutions that have sufficient longitudinal data can see how well students who complete MyLab & Mastering-enabled courses perform in subsequent college-level courses compared with those who entered via a traditional format.

67.7% All Students | **72.5%** Students from Redesign Course
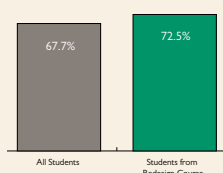
At **Northern Virginia Community College,** the success rate in Math for Liberal Arts for all students was 67.7%; for students who had completed the redesigned developmental math course, **the success rate was 72.5%.** The success rate in Precalculus for all students was 57.7%; for students who had completed the redesigned developmental math course, **the success rate was 72.0%.**

57.7% All Students | **72.0%** Students from Redesign Course

50% Before Redesign | **80%** After Redesign
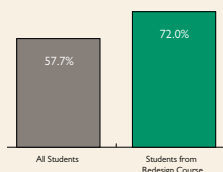
At **University of North Carolina, Greensboro,** retention rates in courses subsequent to Introduction to Business Computing increased 30 percentage points— from 50% prior to MyITLab implementation to 80% after the redesign.

61% Before Redesign | **76%** After Redesign
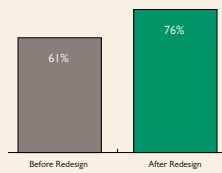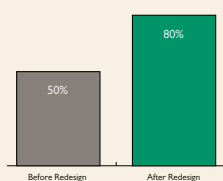
At **Reading Area Community College,** success rates in subsequent, for-credit courses increased from 61% prior to redesign of its noncredit reading skills course to 76% after redesign.

81% Before Redesign | **87%** After Redesign
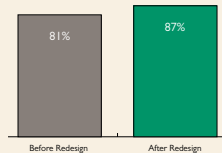
At **Louisiana State University,** success rates in Trigonometry and Business Calculus increased from 81% prior to redesign of College Algebra to 87% after redesign.

59% Before Redesign | **76%** After Redesign

46% Before Redesign | **65%** After Redesign
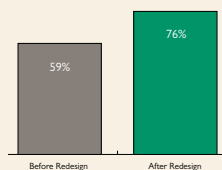
At **Pearl River Community College,** completion rates in College Algebra went from 59% prior to the redesign of the school's developmental sequence to 76% after redesign; success rates in Intermediate Algebra increased from 46% prior to redesign to 65% after it.
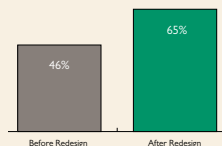
SEVEN PRINCIPLES FOR GOOD PRACTICE IN UNDERGRADUATE EDUCATION

Following are the Seven Principles for Good Practice in Undergraduate Education as compiled in a study supported by the American Association of Higher Education, the Education Commission of the States, and the Johnson Foundation. They are timeless, seminal, and as relevant today as they were in 1991—before online courseware and the ubiquity of the Internet appeared in the higher education landscape.

Good practice in undergraduate education:

1. Encourages student–faculty contact
2. Encourages cooperation among students
3. Encourages active learning
4. Gives prompt feedback
5. Emphasizes time on task
6. Communicates high expectations
7. Respects diverse talents and ways of learning

Arthur W. Chickering and Zelda F. Gamson. Applying the Seven Principles for Good Practice in Undergraduate Education. New Directions for Teaching and Learning no. 47, Fall 1991. San Francisco: Jossey-Bass.

VISIONS FOR THE FUTURE

University of North Carolina at Greensboro: MyITLab

Beginning in fall 2014, University of North Carolina at Greensboro plans to move its Introduction to Business Computing course to an emporium model, which will enable faculty to meet higher student demand by offering more sections. Faculty are confident that with MyITLab they can both make this happen and sustain or improve their current level of student success.

Missouri State University: MyPsychLab

Faculty at Missouri State University are committed to continuing data collection and refining their approach. By both quantitative and qualitative measures, they've experienced success with their MyPsychLab redesign: improved learning outcomes, reduced absences, reduced overall costs, enlivened pedagogy, and a more dynamic learning experience for both students and faculty. Future goals include further improvement of D/F/W rates and student satisfaction. Their vision is unwavering and they look forward to a continued partnership with Pearson.

SYSTEMWIDE SUCCESS

MISSOURI STATE AND SYSTEM COURSE REDESIGN INITIATIVE

Starting in 2010 in partnership with the National Center for Academic Transformation, the Governor of Missouri and Missouri's public four-year institutions established a major course redesign initiative designed to achieve improvements in learning outcomes and reductions in instructional costs.

Redesign projects focused on large-enrollment, introductory courses, which have the potential of impacting significant student numbers and generating substantial savings. By the end of fall 2012, 11 schools had completed the redesign process and fully implemented their redesigns. Six out of the 11 projects used Pearson technology—these six projects were also the *only* projects in the initiative to demonstrate improved student learning as measured by direct comparisons of content mastery. *In addition, each of the six Pearson-supported redesigns reported a significant decrease in instructional costs and is committed to sustaining the redesign format.*

http://www.thencat.org/States/MO.html

School	Product	Student Learning	Instructional Costs	Will Continue
Lincoln University	MySkillsLab	↑	↓ 32%	Yes
Missouri State University	MyPsychLab	↑	↓ 10%	Yes
Missouri University of Science and Technology	MasteringChemistry	↑	↓ 32%	Yes
University of Central Missouri	MyMathLab	↑	↓ 13%	Yes
University of Missouri–Kansas City	MyMathLab	↑	↓ 35%	Yes
University of Missouri–St. Louis	Pearson Custom Media	↑	↓ 28%	Yes

CONCLUSION

More than simply successful implementations, the projects described on the previous pages are victories. Behind the increased final exam grades, subsequent success rates, and institutional cost savings are innumerable and unnamed people who have become better equipped to pursue their academic goals, support themselves and their families, and achieve their life dreams.

An Ongoing Process

We applaud the institutions included herein for their efforts and determination. But make no mistake: those efforts are not over. A successful implementation never truly ends. It is an ongoing process, ever evolving with the emergence of new and improved technology, the entry of each unique cohort of students, and the increased amount of information gleaned via the long-term tracking and measuring of student data.

By employing the 10 best practices described in this report, these implementations have the tools they need to sustain and even improve over time.

Pearson's Faculty Advisor Network (FAN) is available to help you improve the teaching and learning experience at your institution. Visit the FAN site to meet and engage with a community of educators eager to share advice, tips, and best practices related to MyLab & Mastering products. Join the network at http://community.pearson.com/fan.

The Pearson Family of Solutions

Pearson offers solutions for all kinds of educational needs, for all of the types of courses instructors teach, and for all of the ways educators teach those courses. Combined with classroom-tested best practices, the possible configurations of effective implementations are limitless. Let us help you:

- **Increase achievement.** Instant access to reliable data can help in developing personalized learning, assessment, and instruction and can provide a road map for faculty and institutional effectiveness.

- **Expand access.** From digital course materials and real-time assessments to fully online courses, Pearson's learning solutions are more flexible, adaptive, and accessible than ever before.

- **Enable affordability.** Innovative technology offers the best opportunity to deliver personalized, scalable, and engaging solutions that drive results up and drive costs down.

For additional models of sustainable learning strategies, visit the library of MyLab & Mastering case studies at www.pearsonmylabandmastering.com/results.

We look forward to hearing about your achievements and to including your school's implementation in the next *10 Best Practices* report. To share your success, contact Brian Buckley, program manager, efficacy research, at brian.buckley@pearson.com.

HELPFUL PEARSON LINKS

Below you'll find a list of helpful links, each one developed to inspire, support, promote conversation among educators, and ensure that the latest and most-effective practices are shared across the industry. We hope you find them useful and urge you to share them with colleagues and others committed to improving the teaching and learning experience.

16 Proven Ways to Help Your Course Redesign Succeed: Best practices from developmental math redesigns using MyMathLab in a lab-based setting at community colleges

College and Career Readiness Community

Course Redesign Community

Course Redesign Website

Faculty Advisor Network

Results Gallery

Teaching and Learning Blog

GETTING STARTED Planning your implementation

1. What are the main issues you are trying to solve?

2. What are the quantifiable goals you want to achieve?
    Example: Increase student retention rates by 20% over the course of a semester, see an effect size of 0.5 or better on learning gains.

3. When do you want to start integrating MyLab & Mastering into your course? Will you start with a pilot course? If so, at what point do you foresee moving into a full implementation?

4. What course materials are you using? Do they align with your intended outcome?

5. Have you pursued grants or initiatives? If yes, what are they?
    Note: Check with your Pearson partner or visit Pearson's Grant Help Center at www.pearsonhighered.com/granthelp/ to learn more.

6. Do you plan to hold organizational or professional development meetings for the faculty, lab staff, IT administrators, or others?

7. List three ways to educate the culture of your faculty involved in the project.
    Example: Invite guests from institutions that have successfully implemented or redesigned with MyLab & Mastering.

8. Who comprise your implementation or redesign team (faculty, staff, lab directors, senior administrators)? Who will be responsible for managing the actual implementation or redesign?

9. How will you measure success?
    Example: Retention rates, final exam scores, final course grades, and subsequent success

10. Will you use historical data to support the efficacy of MyLab & Mastering? Will you administer common exams and assessments?

11. MyLab & Mastering assignments will contribute what percentage to a student's final course grade?

12. Do you have—or have to seek—approval from your Institutional Review Board?

13. What is your main concern about implementing MyLab & Mastering?

14. At the end of the course, would you like assistance in analyzing your data?
    If so, contact your local Pearson representative.

INSTITUTIONS IN THIS REPORT

Pearson is the world's leading learning company. We partner with faculty and institutions to create innovative solutions that improve student achievement and institutional effectiveness. We support learning from the time a child enters school and throughout the educational journey. We help students get to college, succeed in college, enter the workforce, and attain their professional goals. We create and connect content, technology, assessments, and services that result in unique learning solutions. We deliver the services that help academic institutions achieve their goals.

MasteringA&P®

MasteringBiology®

MasteringChemistry®

MyAccountingLab®

MyArtsLab™

MyFoundationsLab™

MyHistoryLab™

MyItalianLab®

MyITLab®

MyMathLab®

MyPsychLab®

MyReadingLab™

MySkillsLab®

MyWritingLab™

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