MyLab Statistics Inclusive Access study documents student success at Miami University, Ohio

Key Findings

- Miami University's Pearson Inclusive Access implementation of MyLab Statistics, as part of a larger course redesign and textbook change, has played an important role in improved student learning outcomes.
- Inclusive Access has facilitated the department's transition to hybrid course delivery at the Oxford campus by enabling MyLab's integration within the university's LMS, providing students code-free access to the program at the start of the semester.
- Student success at the Oxford campus has increased by 5.6 percentage points since Inclusive Access has been implemented as part of the course redesign. Students appreciate the cost savings and streamlined access across devices.

School name
Miami University, Oxford, OH

Course name
Statistics

Course formats
Face to face, hybrid, and online

Course materials
MyLab Statistics, *The Art and Science of Learning* from Data by Agresti and Franklin

Timeframe
Fall 2014–Spring 2016

Educator
Lynette Hudiburgh, Course Coordinator and Lecturer

Results reported by
Dina Yankelewitz, Pearson Program Outcomes Analytics Manager

Setting

Miami University is an Ohio public university. Its main campus is located in Oxford, Ohio, about thirty-five miles north of Cincinnati, with four additional regional locations in Hamilton, Middletown, West Chester, and the European Center in Luxembourg. The Oxford campus enrolls approximately 16,000 undergraduate students and 2,500 graduate students, while the regional campuses in Ohio boast a combined enrollment of 5,000 students. Forty percent (40%) of students are state residents, with freshman enrollment including representation from nearly all 50 states. Seventy-eight percent (78%) of students are White, 3.5% are Hispanic, 4% are Black, and 2% are Asian. Ten percent (10%) of students are non-residents originating from more than 50 coun-

tries. The Department of Statistics offers courses at the Oxford, Middletown, and Hamilton campuses. Over 60% of students enrolled in the introductory statistics course are Oxford students.

Challenges and Goals

Miami University's Department of Statistics has been a long-time user of MyLab™ Statistics—Pearson's online homework, tutorial, and assessment application—for its introductory algebra-based statistics course (STA 261) and has been satisfied with the program overall. However, they sought to facilitate student access by eliminating the need to wait for financial aid approval to purchase course materials, streamline the enrollment process and eliminate student difficulty with access codes. At the same time, they were interested in integrating MyLab with Canvas, their learning management system (LMS). Pearson Inclusive Access to MyLab Statistics via MyLabsPlus offered several advantages: all students gain immediate access to course materials via the university LMS on or before the first day of class; access codes are eliminated; and students benefit from a 13% discount on course material.

Implementation

The University implemented Inclusive Access to MyLab Statistics on all three campuses in Fall 2014. The previous year, faculty piloted the model in a few sections of the course. At the Oxford campus, which had been using a Pearson text previously but transitioned to a different Pearson text, Agresti and Franklin's *The Art and Science of Learning from Data* during Fall 2014, MyLab Statistics was integrated into the LMS immediately. The Hamilton campus transitioned from a different Pearson text and also adopted Agresti and Franklin during the move to Inclusive Access, enabling LMS integration from the start as well. At the Middletown campus, instructors continued using their original Pearson text during the 2014–2015 academic year and only transitioned to Agresti and Franklin during the 2015–2016 academic year. This required students to redeem an access code when registering for the course during the 2014–2015 school year, and MyLab was not integrated into the LMS. The following year, all campuses used the same Pearson text, did not require the use of access codes, and integrated MyLab into the LMS.

The move to Inclusive Access assisted the Oxford campus in transitioning from a face-to-face delivery model to a hybrid one in their introductory statistics course. Beginning Fall 2014, all sections of STA 261 at Oxford were offered as hybrid courses. As Ms. Lynette Hudiburgh, course coordinator and lecturer at the Oxford campus, explained, "Inclusive Access facilitated the move to hybrid course delivery. We were trying to streamline the process as much as possible. Any time the method of course delivery is changed, it is difficult. Integrating MyLab Statistics in the LMS and eliminating the need for access codes was helpful during this transition."

In addition to using MyLab content delivered through the university LMS, the department added video to the course, requiring students to take quizzes about the video content before learning the assigned topic in class. This helps students build background knowledge that can lay the foundation for developing deeper conceptual understanding during the lecture. In addition, faculty began using Learning Catalytics™ to help guide assessment. Once a week, they would pose Learning Catalytics questions as students worked on problem sets. If students answered these incorrectly, faculty would intervene with reteaching or with partner discussion. As Hudiburgh explained, "Without Learning Catalytics we would not have been able to determine what students did and did not understand, especially given our large class sizes."

Observed Impact

Hudiburgh noted that enrollment has become more consistent across sections during the Fall 2015 semester, with all sections of the course filled. "It seems like attendance was distributed evenly across the board, with 32–34 students in each class. In the past, some class enrollments would drop much lower than that range." She concluded that this most likely is the result of fewer withdrawals overall in the course.

Assessments

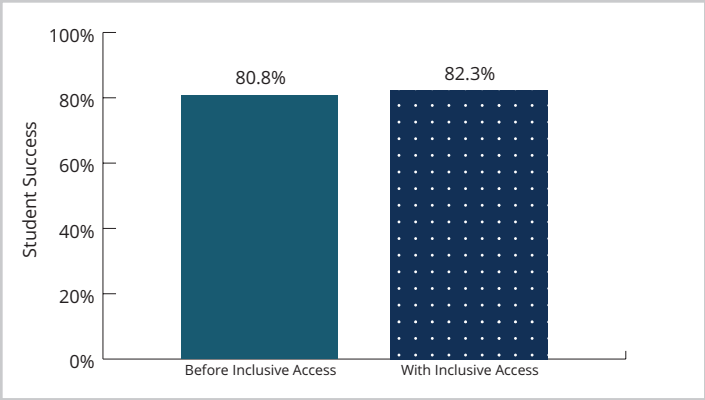
- 40% Exams (two exams 10% each; final exam 20%)
- 25% Group projects
- 15% MyLab Statistics quizzes
- 5% Video lecture quizzes
- 5% MyLab Statistics homework
- 5% Lab activities and problem sessions
- 5% Learning Catalytics

Results and Data

Across all campuses, the percentage of students successfully completing the course with an A, B, or C increased after Inclusive Access was introduced. As shown in Figure 1, the percentage of students succeeding in the

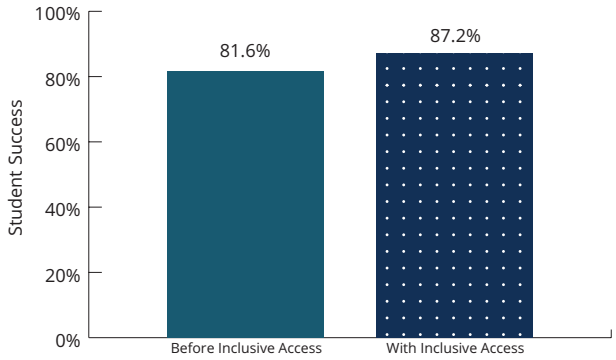
course increased 1.5 percentage points after the implementation of Inclusive Access (n=10,232). This change is statistically significant (p=.0361).

Student success (A, B, or C), all campuses



When examined at the campus level, students at the Oxford campus showed the most growth. At Oxford, which services nearly two-thirds of the students enrolled in the course, the transition to Inclusive Access facilitated the move to hybrid course delivery. Inclusive Access to MyLab enables easier and immediate access to the digital course materials that are integral to the online delivery of a significant portion of the course content in a hybrid course. As shown in figure 2, student success rates at Oxford increased 5.6 percentage points, from 81.6% of students earning an A, B, or C before Inclusive Access (n=4,529) to 87.1% of students succeeding after Inclusive Access was introduced (n=1,827, p<.0001).

Student success (A, B, or C), Oxford campus



It is important to note that due to the textbook change at all three campuses over the past two years and a change in the course delivery method at the Oxford campus, it is not possible to determine the extent to which the increased student performance can be attributed to the transition to Inclusive Access. This improvement in student learning outcomes is most likely the result of a combination of factors, including the transition to Inclusive Access, Oxford's transition to hybrid course delivery, and adoption of a new course text.

The Instructor Experience

With digital direct access in place, students don't have to wait for financial aid to be released before they can begin purchasing course texts. Faculty members appreciate the immediate access that students have to the course material, allowing them to begin teaching math content at the start of the semester.

The Student Experience

Students enjoy the easy access to MyLab on mobile devices. They have commented on how helpful it is to have access to Learning Catalytics and StatCrunch directly on their smartphones. Students also value the cost savings (nearly 13%) and the fact that Inclusive Access eliminates the need to purchase access codes from the bookstore and removes the hassle of creating an individual sign-in for the program.

Conclusion

Inclusive Access has helped faculty and students at Miami University by enabling more streamlined course material delivery, offering simpler and earlier access, and reducing costs. Students are able to access the course materials at the start of the semester through the University's LMS, and faculty believe that Inclusive Access has facilitated Oxford campus' transition to hybrid course delivery by allowing students immediate access to and seamless integration of MyLab content that is critical to the online portion of the course. As the student outcomes data indicate, Miami University has used Inclusive Access as part of a larger course redesign that has positively impacted student success in a foundational statistics course.