

Maysville Community and Technical College

Case Study

**CONNECT PHYSICS WITH
INCLUSIVE ACCESS INCREASES
THE NUMBER OF STUDENTS
WHO EARN A'S, B'S, AND C'S BY
PROVIDING DAY-ONE ACCESS
TO MATERIALS AND BY KEEPING
STUDENTS ENGAGED IN LEARNING**

Setting

Maysville Community and Technical College (MCTC) is one of 16 two-year institutions in the Kentucky Community and Technical College System (KCTCS). MCTC offers arts and science courses and associate degrees for transfer to four-year colleges in more than 25 areas of study including Nursing, Business Administration, Early Childhood Education, and Information Technology. MCTC also offers workforce training, technical degrees, and certificates.



Study Specifics

School Name:

Maysville Community and Technical College (MCTC)

Course Name:

College Physics I – PHY 201 90Z1 / PHY 201 90ZD (4 credit hours)

Program:

College Physics, by Alan Giambattista, 5th edition

Educator:

Scott Miller, *Associate Professor*

Integration:

Inclusive Access and Connect Physics – Digital and Online only

Implementation

Prior to using Connect Physics, Scott Miller used a print text and homework from the textbook submitted via Blackboard®. Miller switched to Inclusive Access because he wanted students to have access to learning materials from day one, especially in an online environment. Miller says, "It's nice to know students can start on the course right away without a book distribution delay."

Students log into Blackboard for the course and have instant access to course material. Miller assigns online homework and textbook readings through SmartBook® exercises. Miller says, "In an online course, one never knows how much the students are reading the text, which is critical for learning the material. However, students are completing the SmartBook exercises in Connect, which would imply they are reading the textbook more."

Students are assigned a SmartBook chapter, a corresponding homework set, and a chapter quiz each week. Students are also required either to attend a session via Blackboard's Collaborate or to write a summary of a recording of the Collaborate session. Students are responsible for four graded assignments each week and four tests given at intervals determined by the chapters covered.

Students' grades consist of 15% chapter homework from McGraw Hill Connect® and SmartBook exercises, 15% Connect quizzes, 25% Collaborate sessions, and 45% Connect exams.

Miller says he no longer lectures, so his time spent prepping material for class and grading is minimal. "I no longer lecture. Instead, I meet students in a once-a-week problem-solving session. My live grading falls on those written summaries of Collaborate sessions. All other grades are determined by student interaction with various aspects of Connect used in the course."

Miller believes the online homework and immediate feedback help retain students in the course. "There seems to be a higher percentage of students sticking out the course because they get immediate feedback on their assignments via Connect. Their interest stays engaged in the course, which is one of the things I hoped might happen."

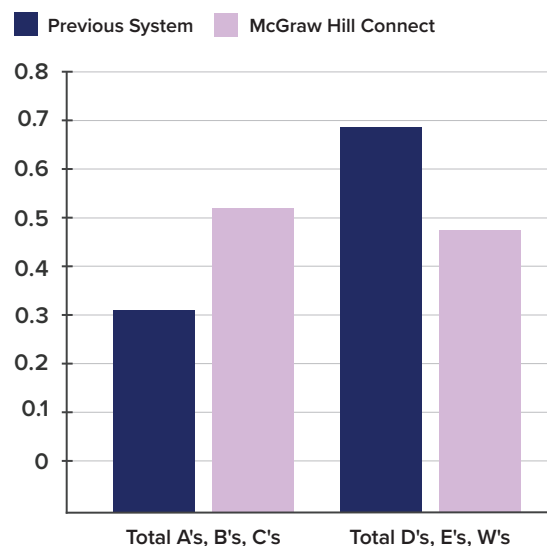
Miller uses Missed Questions and Student Performance reports. He says Student Performance reports are especially helpful to help students answer questions about their grades.



Results Achieved

When using Connect Physics, 52% of students earn A's, B's, and C's compared to the previous success rate of 31% – an improvement of 21%. The total number of students who earned D's, E's, and W's fell to 48% (Figure 1). Note: An E grade is below 59% and is considered a failing grade.

Figure 1:
ABCs vs DEWs

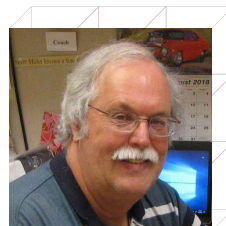


Conclusion

Connect Physics improves students' success rates in an online class by providing students the opportunity to read and to check their comprehension with SmartBook assignments. Further, students get immediate feedback on their assignments and stay engaged in the course. The number of students who earned A's, B's, and C's improved to 52% -- an increase of 21%. The number of D's, E's, and W's fell to 48%.

Class Description

College Physics I, the companion lecture to PHY 202 laboratory, focuses on the mechanics of matter as governed by Newton's Laws; by the conservation laws of energy, momentum, and angular momentum; and thermal processes using algebra and basic trigonometry.



Instructor Bio

Scott Miller, an associate professor at MCTC, is primarily responsible for teaching Technical Physics, Algebra/Trig-based Physics, and Introduction to Astronomy. He teaches labs associated with the Physics courses.

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“Students’ grades improved because Inclusive Access gives students the opportunity to use learning materials immediately, and SmartBook forces students to read the chapters to complete the homework. Students appreciate getting immediate feedback on their assignments from Connect, and that keeps them engaged in the course.”

– Scott Miller, Associate Professor at MCTC