Student Mastery Results
November 2017
Overview

What does this data show?
This data shows the results that U.S. college students have achieved using Knewton.

Where did this data come from?
This sample is drawn from 2017 implementations of the Knewton course product.

Generally speaking, what does this data pertain to?
Mastery: Whether Knewton students are completing assignments tied to learning objectives
Impact: Whether students who achieve mastery are more likely to succeed in their course

Is this a meaningful approach to efficacy?
Yes! The results here strongly suggest a causal relationship between Knewton and academic performance.
Key Takeaways

1. Students using Knewton are achieving mastery at high rates.

2. Mastery impacts student performance: students who achieve mastery perform better on quizzes from their instructor.

3. Knewton is an equalizer: Students who struggle overall are gaining ground on their peers when it comes to quiz scores.

4. Knewton can improve future performance: students who master one concept are more likely to master more advanced concepts.

5. Knewton can help students learn faster: students who master one concept spend less time mastering advanced concepts.

- 10,000+ students in sample
- 130,000+ assignments completed
- 87% of the time, students achieve mastery
- 82% of students who struggle with an assignment achieve mastery
- 38-point increase on quiz scores of students who struggle overall
Definitions

**Assignment**
Instruction and assessment in Knewton tied to course learning objectives.

**Mastery**
Successful completion of an assignment, as determined by Knewton’s proficiency models.

**Quiz**
Assessment delivered by instructors to measure student progress against course learning objectives.

**“Students who struggle overall”**
Students who demonstrate poor overall academic preparedness, as demonstrated in Knewton. Students who start out in the bottom 25% of all students in a domain meet this description.

**“Students who struggle with an assignment”**
Students who have difficulty completing a Knewton assignment. Students who meet this description are of varying academic performance overall.
Data
With Knewton, students achieve mastery at high rates

Across all students, 87% of the time, students achieved mastery through Knewton.

Among students who struggled with an assignment, 82% achieved mastery.
Knewton mastery has an impact on student performance

Better quiz scores for all students
Quiz scores go from 55% for students who didn’t demonstrate mastery to 81% for those who did.

Better quiz scores for students who struggle overall
Mastery led to an average increase in quiz score of 38 percentage points, from 40% to 78% correct.
Achieving mastery in Knewton helps students perform better in the future

The “virtuous cycle” of mastery

Mastery in Knewton leads to better future performance.

For students who struggle overall, achieving mastery on previous assignments increases the chances that they will complete a related assignment from 62% to 90%.

Student designations refer to overall academic performance, as demonstrated in Knewton.
Students who achieve mastery in Knewton learn faster

The “virtuous cycle” of mastery

For students who perform at an average level overall, achieving mastery on previous assignments decreases the average number of questions necessary for them to complete a related assignment by an average of 38%.