

2017 Student Data Insights

Overview

What does this data show?

This data shows the results that U.S. college students have achieved using alta, Knewton's fully integrated adaptive learning courseware for higher education.

Where did this data come from?

This sample is drawn from 2017 implementations of alta in U.S. colleges and universities.

Generally speaking, what does this data pertain to?

Proficiency: Whether Knewton students are completing assignments tied to learning objectives

Mastery: Whether students who demonstrate proficiency are more likely to perform well on summative assessments

Is this a meaningful approach to efficacy?

Yes! The results here strongly suggest a causal relationship between alta and academic performance. However, these results are best viewed as one element in a broader context that includes instructor-led case studies and feedback from both students and instructors.

Key Takeaways

1

Students using alta are achieving proficiency by completing assignments at high rates.

2

Completing alta assignments is directly correlated with better performance on summative assessments.

3

Alta provides the biggest benefit to students who need it most — those who struggle.

4

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

5

Alta 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%

students achieve proficiency by completing their assignment

82%

of students who struggle with an assignment achieve proficiency by completing that assignment

38point

increase on quiz scores of students who struggle overall

Definitions

Assignment

Instruction and assessment in Knewton tied to course learning objectives.

Proficiency

Successful completion of an assignment, as determined by Knewton's proficiency models.

Mastery

Successful completion of a summative assessment that is tied to course learning objectives.

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 alta. 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 an alta assignment. Students who meet this description are of varying academic performance overall.

Data

With alta, students demonstrate proficiency by completing assignments at high rates.

Across all students, **87%** of the time, students demonstrated proficiency by completing their alta assignment.

Among students who struggled with an assignment, **82%** demonstrated proficiency by completing that assignment.

Demonstrating proficiency by completing alta assignments positions students to achieve mastery

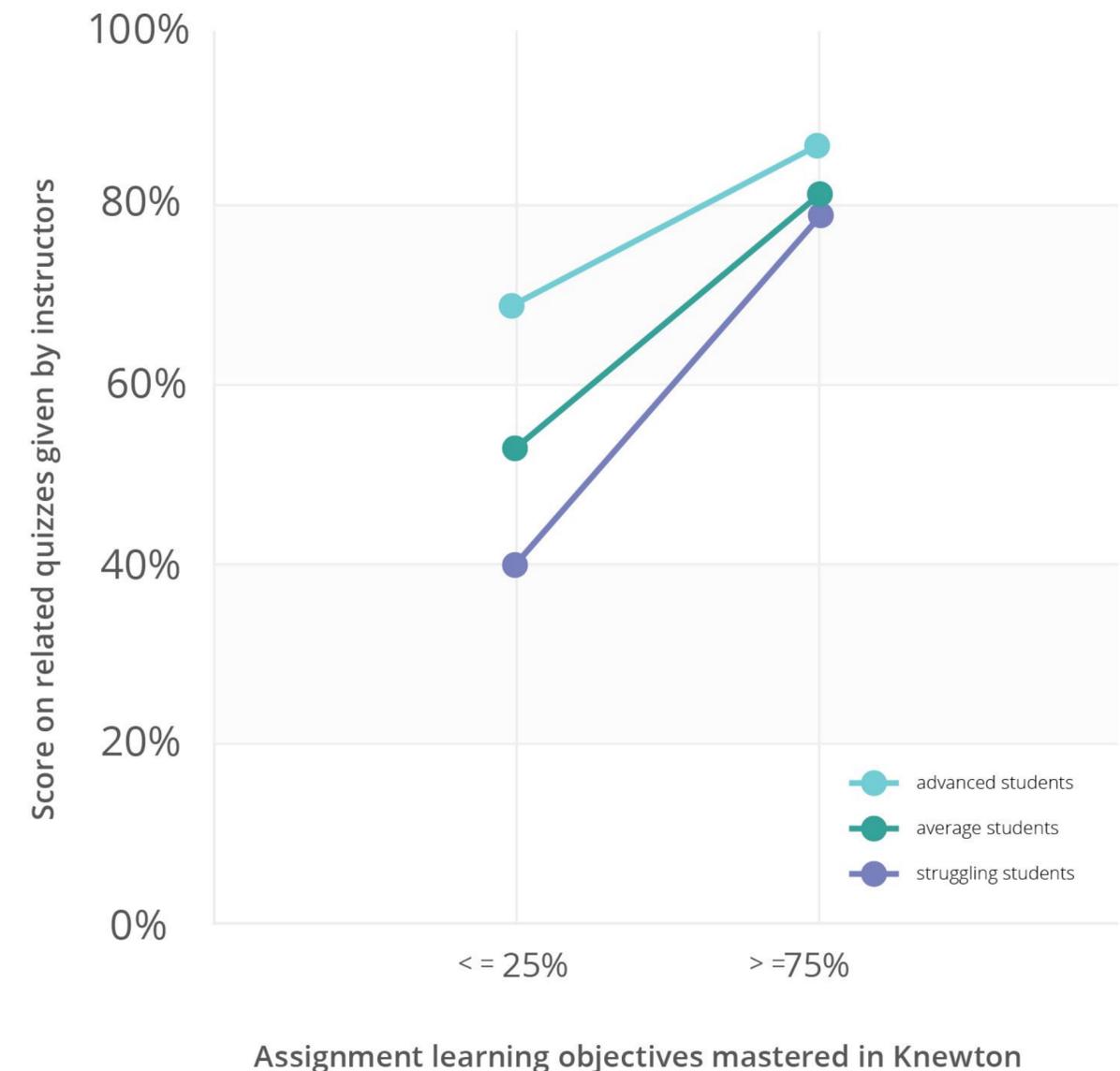
Better quiz scores for all students

Quiz scores go from 55% for students who didn't demonstrate proficiency to 81% for those who did.

Better quiz scores for students who struggle overall

Proficiency led to an average increase in quiz score of 38 percentage points, from 40% to 78% correct.

Knewton mastery impacts student performance



Student designations refer to overall academic performance, as demonstrated in Knewton

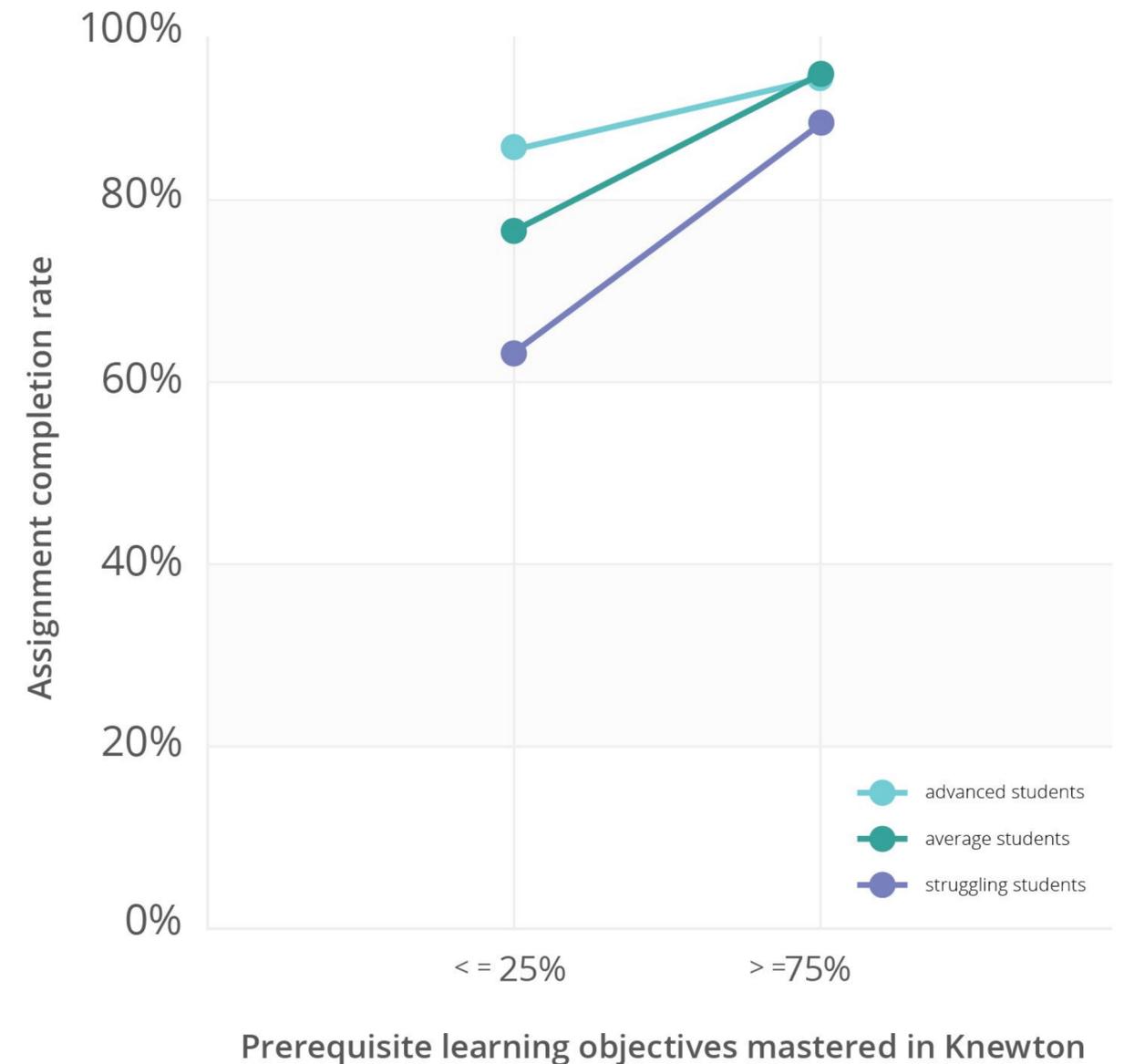
Completing alta assignments helps students *perform better* in the future

The “virtuous cycle” of alta

Proficiency in alta leads to better future performance.

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

Achieving mastery improves students' future performance



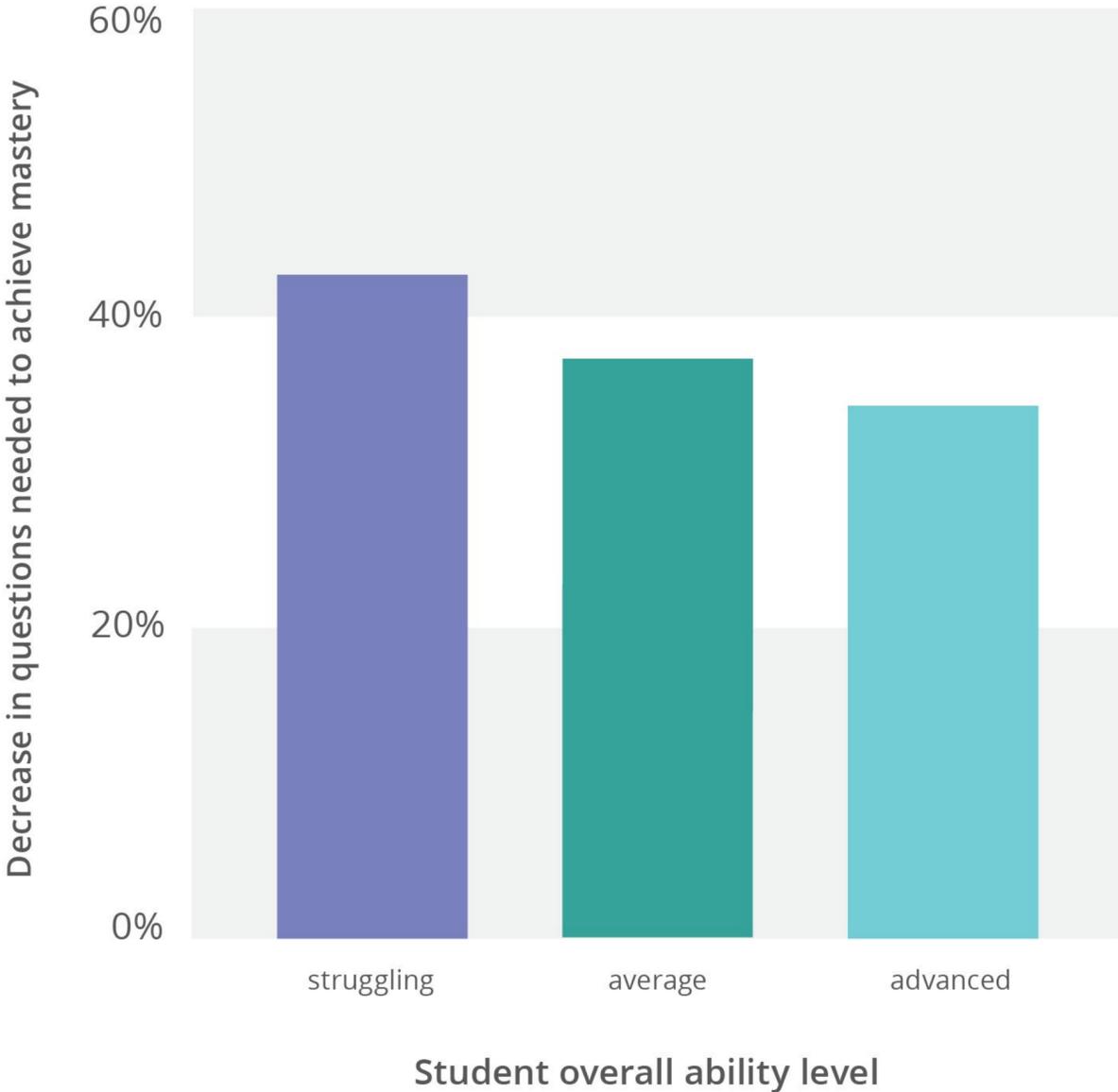
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Students who complete alta assignments *learn faster*

The “virtuous cycle” of alta

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

Achieving mastery helps students learn faster



Student designations refer to overall academic performance, as demonstrated in Knewton

Thank you.