

GRAPHIC GUIDE

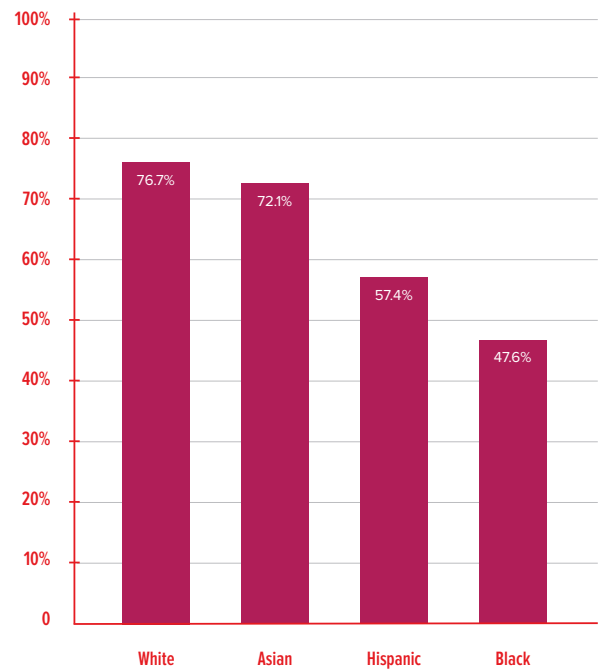
THE EQUITY EQUATION

McGraw Hill
White Paper Series



EDUCATIONAL OPPORTUNITY IS NOT A LEVEL PLAYING FIELD...

Student graduation rates*



SERIOUS OPPORTUNITY GAPS PERSIST WITH FIRST GENERATION STUDENTS, LOW-INCOME STUDENTS, AND STUDENTS OF COLOR.

*Source: National Student Clearinghouse Research "Completing College — National by Race and Ethnicity — 2017," 2017

BUT IT COULD BE.

EDUCATIONAL EQUITY IS ACHIEVABLE, BUT REQUIRES:

- 1 UNDERSTANDING**
of unique challenges faced
by individual students.
- 2 CREATING**
learning environments that
overcome those barriers.
- 3 EMPOWERING**
instructors to choose
course materials that
respect students' unique
backgrounds and
activate a supporting
learning environment.



THE LONG-TERM EFFECTS OF HIGH COLLEGE DROPOUT RATES.

FOR THE STUDENT



A lifetime earnings difference of \$1.28 million between those who hold a bachelor's degree vs. high school diploma.

FOR THE UNIVERSITY



Negatively affects rating, reputation, and ability to recruit, enroll, and retain students.

FOR THE ECONOMY



Shortage of qualified talent to fill critical STEM positions.

THE GAME CHANGER

ADAPTIVE LEARNING PLATFORMS.

PERSONAL PATHWAYS VS. ONE-SIZE-FITS-ALL LEARNING

Best-in-class adaptive learning platforms:

- ▶ **Actively tailor learning** to the individual.
- ▶ **Enable instructors** to better allocate their time where it can have the biggest impact.
- ▶ **Continually assess** skill and confidence levels and provide precise direction to fill knowledge gaps.

THE SCIENCE OF HOW LEARNING HAPPENS.

THE ALGORITHM

A team of scientists and mathematicians at the University of California at Irvine developed an algorithm that could:

- ✓ Assess a student's current knowledge.
- ✓ Adjust itself to the rate at which the student tended to forget new material.
- ✓ Create variability in the lessons, so that the student mastered core principals vs. just memorizing.

THE EVOLUTION

ALEKS, an adaptive online learning platform, was developed using the algorithm. Through constant innovation and technology updates, ALEKS continues to provide instructors with newer, more advanced tools and insights to help them ensure a more equal educational playing field for all students.

ALEKS features include:

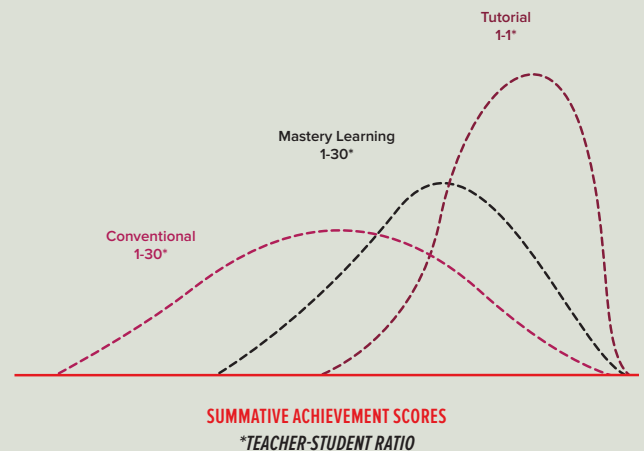
- ✓ **Reporting** that provide insights into how students are learning and retaining topics.
- ✓ **Gradebook** that shows a student's pie progress to help motivate them to achieve their goals.
- ✓ **Video Assignments** that correlate to Chapters or Sections to reinforce in class learning.
- ✓ **Virtual labs** that help bridge the gap between lab and lecture.

THE BLOOM EFFECT

In 1984, **Psychologist Benjamin Bloom** concluded that **nearly all students are capable of high achievement, even though some students:**

- ▶ Entered with prior knowledge.
- ▶ Struggled with different subjects.
- ▶ Learned at different knowledge rates.

ACHIEVEMENT DISTRIBUTION FOR STUDENTS BY INSTRUCTION TYPE



Source: Bloom, Benjamin (1984) "The 2 Sigma Problem"

THE BREAKTHROUGH

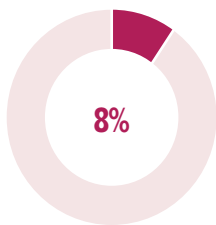
Through the combined power of dedicated teachers, adaptive technology, and thoughtful implementation, **institutions around the world are now executing Bloom's vision of mastery learning and creating equity at scale.**

ADAPTIVE LEARNING IN ACTION.

COLUMBUS STATE COMMUNITY COLLEGE: MATH LAB

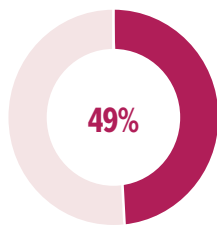
CSCC's Office of Institutional Effectiveness adopted McGraw Hill's ALEKS® in their 1099 course then added the larger Developmental Math sequence in Fall 2013.

Before Adaptive Learning (ALEKS)†

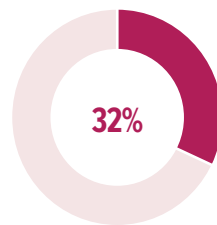


3 year graduation rate for first-time, full-time students.

†2012 Data

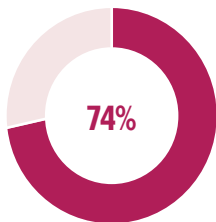


Fall to Fall persistence rates.



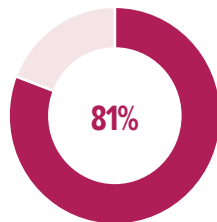
Retention rate for part-time students.

After ALEKS implementation†

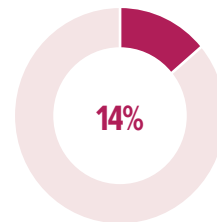


Overall course completion up from 67%.

†2018 Data



Retention rates among Black students up from 68%.



Point gap reduction in course completion success between white and Black students down from 22%.

UNIVERSITY OF INDIANA: PRINCIPLES OF CHEMISTRY

The U of I completed a study comparing 2,561 students who qualified for Principles of Chemistry and Biochemistry by passing (Intro/Prep) Developmental Chemistry with 607 students who qualified by completing ALEKS Prep.

ALEKS Prep vs. Intro/Prep Course

\$1.5 MILLION

When comparing final grades for each group of students, ALEKS Prep was equally as effective as an Intro Prep course, **saving students approximately \$1.5 million.**

ALEKS Prep vs. Semester-Long Intro Course



All ALEKS students performed better.

ALEKS Prep

2.42 GPA

Semester-Long
Intro Course 1.87 GPA

Black students

2.42 GPA up from 1.87.

Source: Internet Based Alternatives for Equitable Preparation, Access and Success in Gateway Courses. Danie T. Hickey, Jill Robinson, Stefano Fiorini, Yanan Feng. The Internet and Higher Education, Volume 44, January 2020, 100693



TEACHING AND LEARNING – ON THE CUSP OF SYSTEMIC CHANGE.

TECHNOLOGY

Has enormous potential to help all students succeed and erase gaps in opportunity.

TEACHERS

Have become new technology's greatest advocates and equity trailblazers.

STUDENTS

Have a more equal playing field, especially underrepresented minorities.

ALEKS LEADS THE WAY TO EQUITABLE EDUCATIONAL OPPORTUNITY.

ALEKS IS AN ADAPTIVE LEARNING PLATFORM THAT...

- ✓ Identifies each student's individual knowledge and knowledge gaps.
- ✓ Creates a personalized learning path tailored to each student's needs.
- ✓ Ensures students have the opportunity to succeed even if they have little foundational knowledge.

GET IN TOUCH

To learn more about how ALEKS can improve student performance at your institution, visit mheducation.com/highered/aleks and request a demo.