

ACT Research Insights: **Supporting Institutions in their Recruitment, Admissions, and Student Success Goals**

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Research included in the 2019 HERD can help inform discussions around:

- **Helping students skill up and avoid remediation in college**
- **Introduction of Eduventures Prospective Student Mindset**
- **Using Eduventures Prospective Student Mindset to improve student recruitment**
- **The value of SEL skills in understanding why females outperform in college**
- **The validity of ACT scores for college admissions among international students**
- **Quantifying institution success given differing populations they serve**

Roadmap

During this session, you will learn more about:

- 1. The validity of ACT scores for college admissions among international students**
- 2. The value of SEL skills in understanding why females outperform in college**
- 3. Helping students skill up and avoid remediation in college**

LOOKING BEYOND THE DOMESTIC
APPLICANT POOL:

**THE VALUE OF ACT
SCORES FOR IDENTIFYING
INTERNATIONAL
STUDENTS WHO ARE
PREPARED TO SUCCEED
IN COLLEGE**

Justine Radunzel, Principal Research Scientist



Background

Every year a growing number of high school graduates residing outside the US take the ACT test.

Many (~60%) request that their scores be sent to US colleges and universities.

Study objective

Collect and document validity evidence supporting the use of ACT scores to make admissions decisions and to identify those most likely to struggle academically, be at risk of dropping out, and who among them is likely to benefit from institutional services and supports for international students

Current study data

First-year GPA

From 1 university state system

- Eight 4-year institutions
- 2010 to 2012 freshman cohorts

Regional Representation

- 10% Americas
- 85% East Asia and Southeast Asia
- 1% Europe and United Kingdom
- 1% Middle East and North Africa
- 3% South Asia
- < 1% Sub Saharan Africa
- < 1% US territories

Retention and Degree Completion

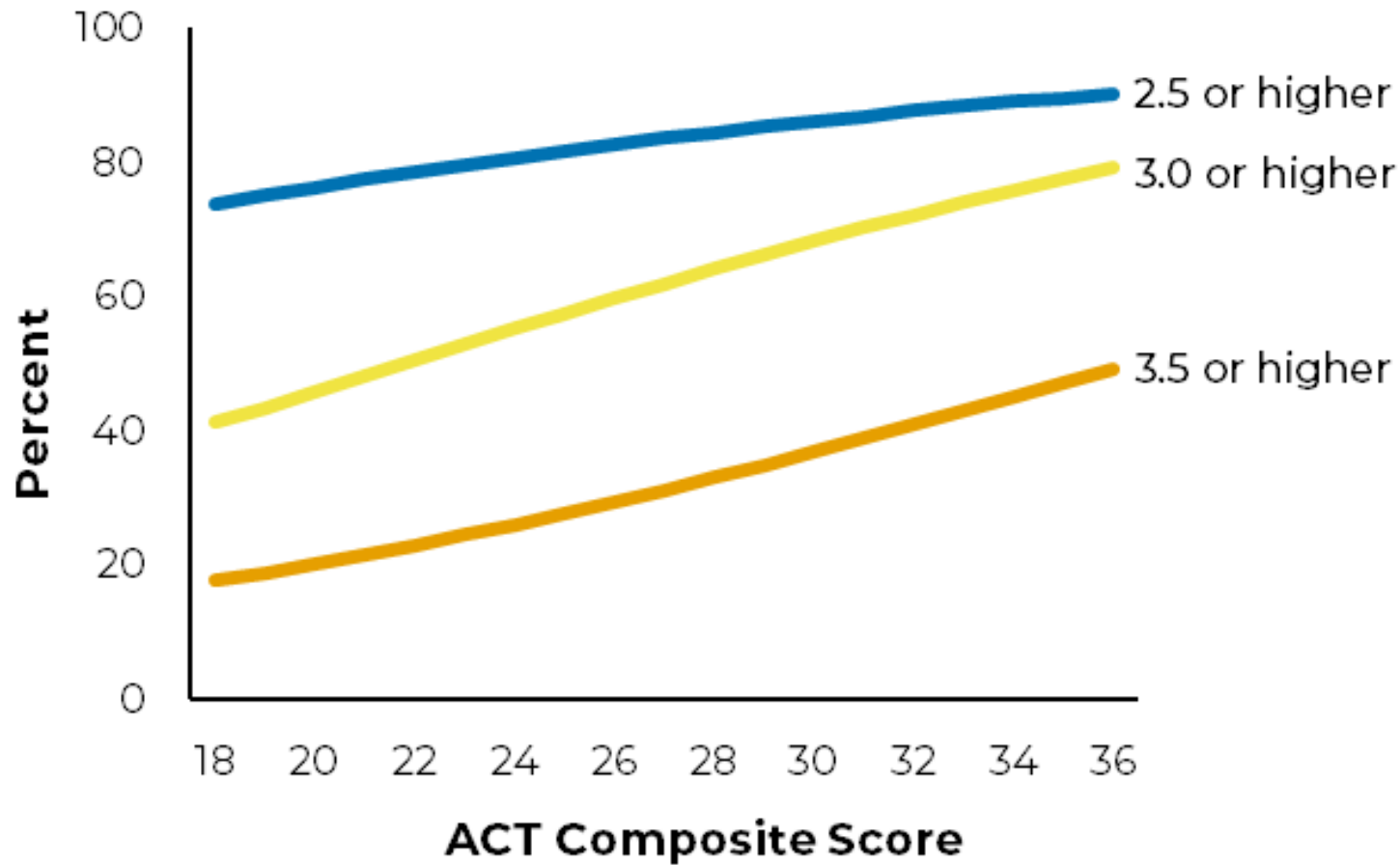
ACT/NSC matched sample

- 717 4-year institutions
- 2011 to 2012 freshman cohorts

Regional Representation

- 23% Americas
- 22% East Asia and Southeast Asia
- 20% Europe and United Kingdom
- 6% Middle East and North Africa
- 7% South Asia
- 4% Sub Saharan Africa
- 18% US territories

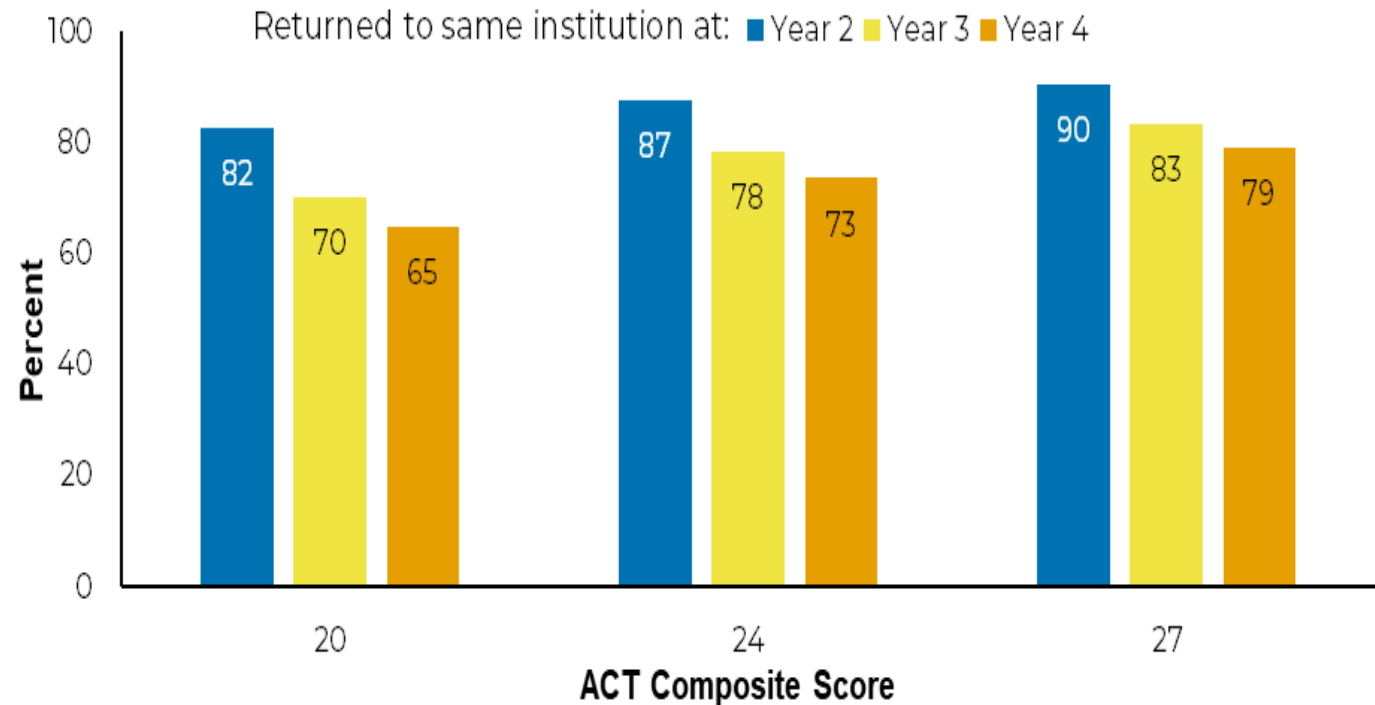
Results - FYGPA



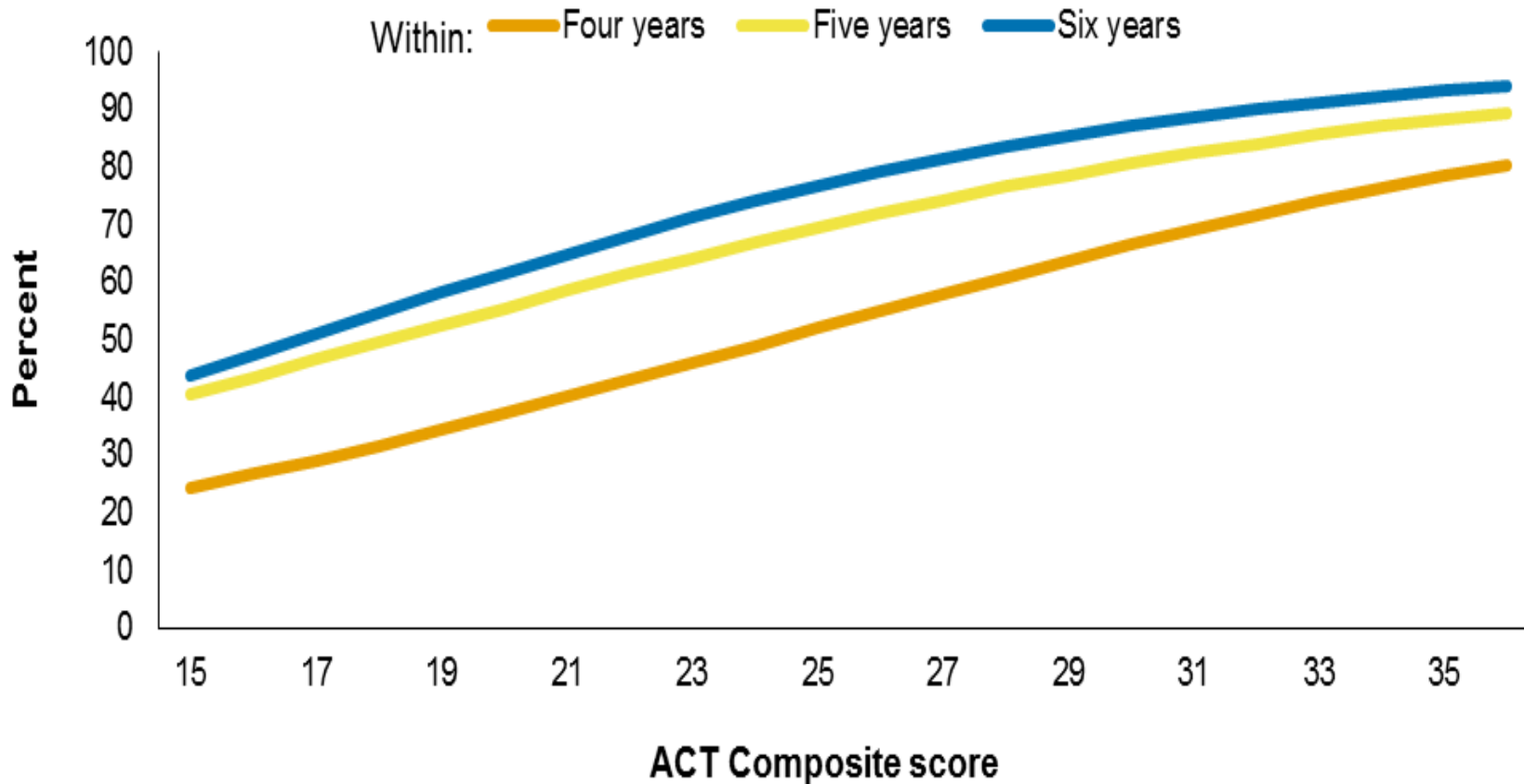
- **International students entering better prepared academically as measured by their ACT Composite score had greater chances of performing well in their college courses.**
- **For example, the typical chances of earning a first-year GPA of 3.0 or higher for international students increased from 46% for those with a score of 20 to 72% for those with a score of 32.**

Results - Retention

- Retention rates varied by students' ACT Composite score with greater attrition occurring for international students entering less academically prepared.
- For example, 82% of international students with an ACT Composite score of 20 returned in year two, 70% in year 3, and 65% in year 4.
- In comparison, the corresponding percentages for those with a score of 27 were 90%, 83%, and 79%, respectively.



Results – Degree Completion



- We find a positive relationship between academic readiness and bachelor’s degree completion rates.
- Completing within four years increased from 37% for those with a score of 20 to 72% for those with a score of 32.
- Completing within six years increased from 62% for those with a score of 20 to 90% for those with a score of 32.

Study implications

- Highlights the positive effect that academic achievement has on college outcomes for international students.
- Provides validity evidence supporting the use of ACT scores for helping to inform college admissions decisions for international applicants.
- Evidence is comparable to that based on domestic students. For example, we find international students have comparable degree completion rates to domestic students with the same ACT Composite score.

WHY DO FEMALES PERFORM BETTER
IN COLLEGE THAN TEST SCORES AND
GRADES PREDICT?

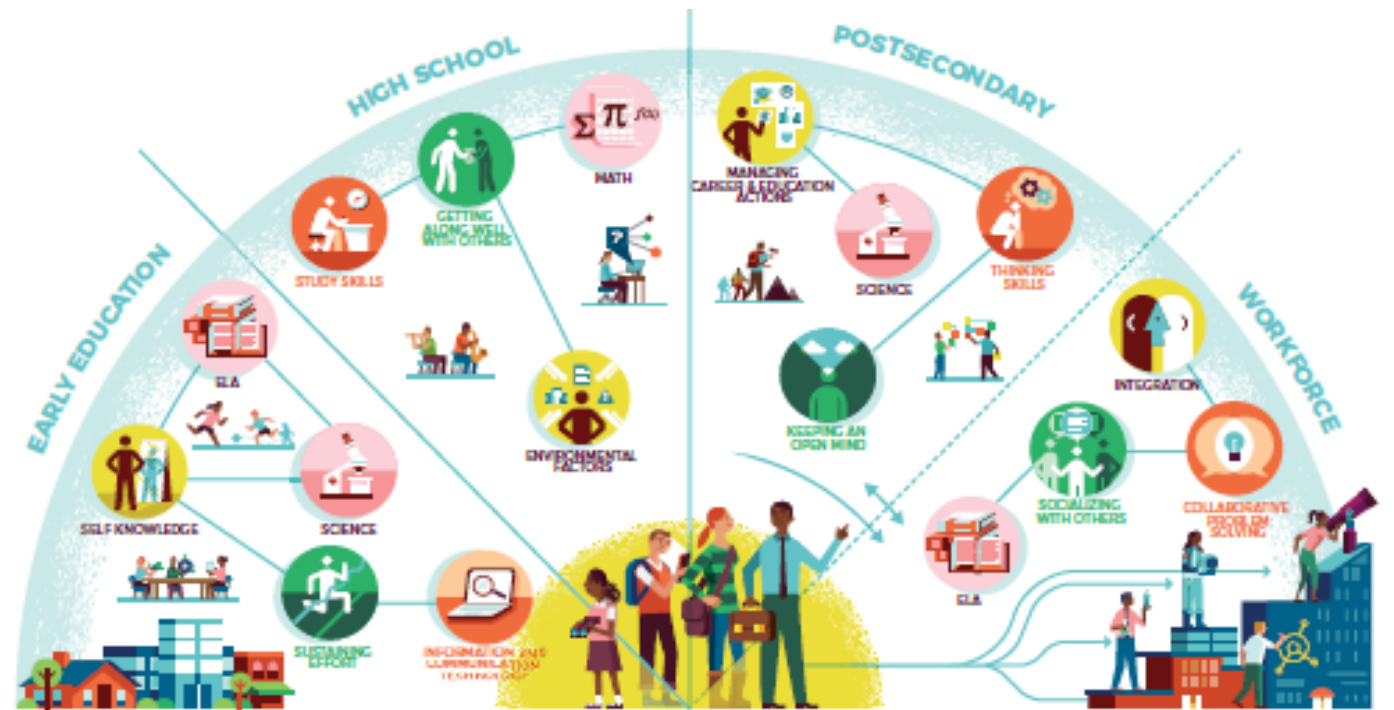
THE IMPORTANCE OF SOCIAL AND EMOTIONAL LEARNING SKILLS

Krista Mattern, Senior Director of Validity and Efficacy Research
Edgar Sanchez, Senior Research Scientist



Holistic Model of Student Success

- Importance of knowledge, skills, abilities, and other personal characteristics beyond the core academic skills, including SEL
- Ignoring these additional skills can paint an inaccurate picture of a student's likelihood of future success.



The holistic model of education and work success

Background and Study Objective

Background:

- Test scores and high school grade point average (HSGPA) underpredict college performance for women
- Women tend to exhibit higher levels of academic discipline (e.g., conscientiousness, grit, hard working)
- Academic Discipline is related to higher academic outcomes.

Study Objective:

- Evaluate the extent to which underprediction of FYGPA for females could be explained gender differences in academic discipline

Current study data

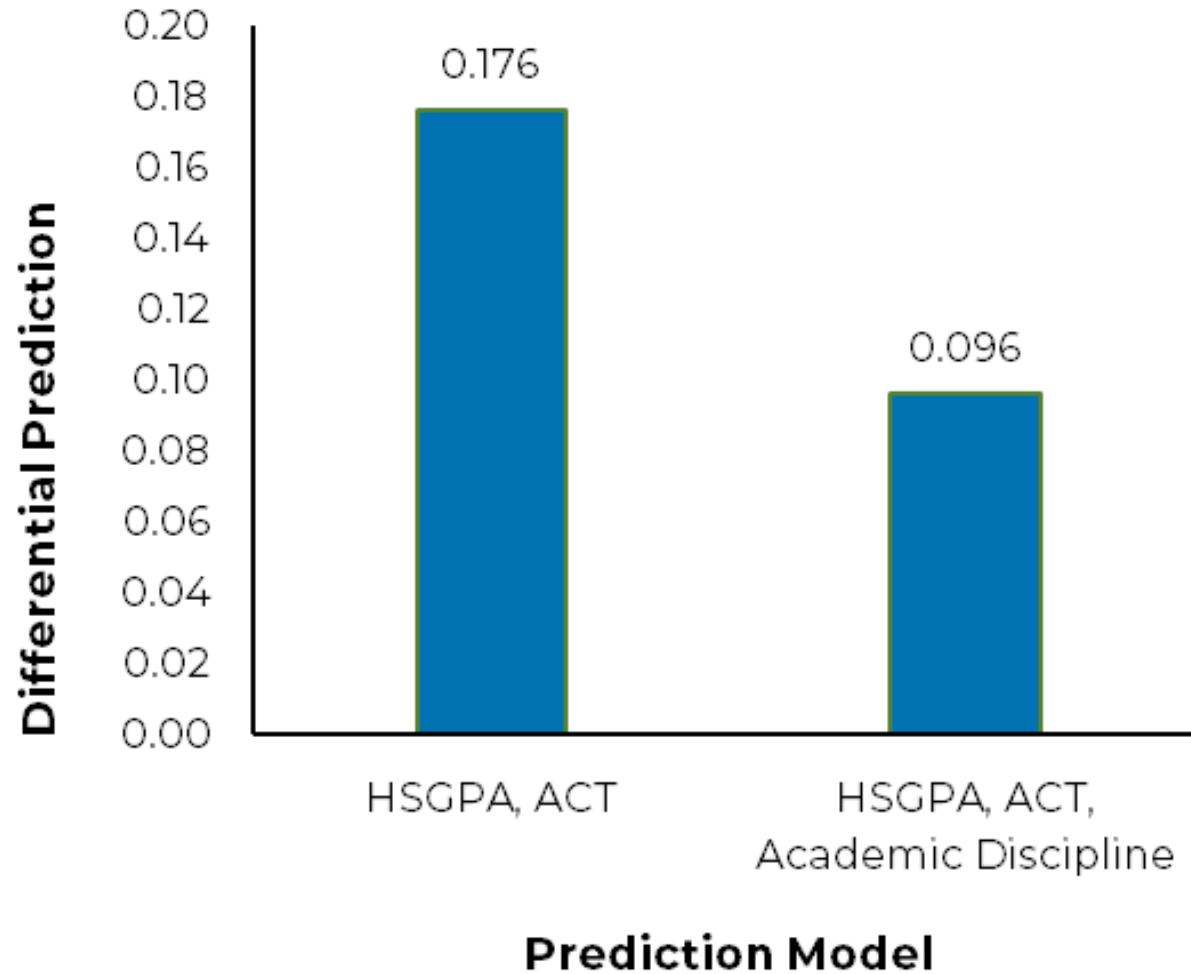
Study sample

- **Nearly 10,000 college students**
 - Took the ACT[®] test in 11th or 12th grade
 - Took ACT Engage[®] upon entering college
- **HS coursework and grades data was collected during registration for the ACT.**
- **FYGPA was collected from 39 2- and 4-yr colleges and universities**

Descriptive Statistics of Study Variables

Variable (Range)	Total		Male		Female		<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
HSGPA (0–4.00)	3.13	0.63	3.05	0.65	3.19	0.60	0.22
ACT Composite (1–36)	20.7	4.5	21.2	4.7	20.3	4.3	–0.19
Academic discipline (10–60)	47.0	8.0	44.6	8.1	48.9	7.3	0.54
FYGPA (0.0–4.0)	2.65	0.94	2.55	0.96	2.73	0.91	0.19

Reduction in Differential Prediction



Underprediction of female performance is reduced by nearly half when Academic Discipline is added to a model that already includes HSGPA and ACT Composite score (0.176 vs. 0.096).

Study implications

Practical applications of the study findings:

1. Consideration of the SEL factor of academic discipline has benefits that are twofold: increased predictive validity and reduced prediction error by gender
2. More accurately identify students that are ready for college-level work and those that may benefit from additional resources and supports

REWORKING REMEDIATION: STREAMLINING STUDENT PATHWAYS TO COLLEGE-LEVEL COURSEWORK

Ty Cruce, Principal Research Scientist

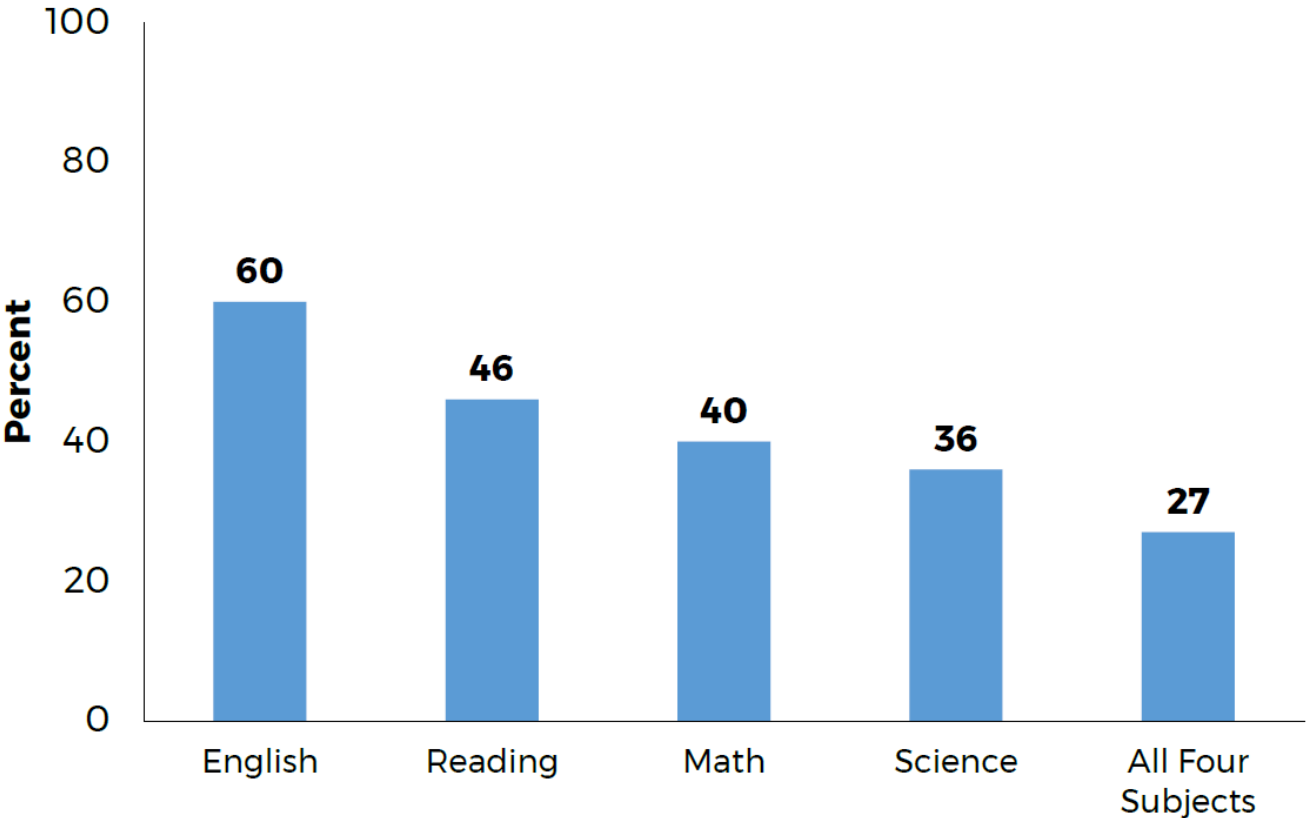
Krista Mattern, Senior Director of Validity and Efficacy Research



Background

Many high school graduates are unprepared for college

Percent of 2018 ACT-Tested High School Graduates Meeting ACT College Readiness Benchmarks by Subject



Background

A number of college students need remediation

Formal remedial courses often:

- Do not count toward graduation requirements
- Lengthen time to earn a degree
- Have direct and indirect costs to students
- Have mixed results

Purpose

There is a growing call to redesign remedial education delivery

Examine the effectiveness of a new approach:

- **EdReady, now offered by ACT as CollegeReady™**

Research includes two case studies:

- **Jacksonville State University**
 - **Mathematics**
- **Chattanooga State Community College**
 - **English**

Purpose

What is CollegeReady?

- **A low-stakes college readiness system for English and mathematics**
- **An outreach tool between colleges and high schools**
- **Administered in addition to or in lieu of placement testing**
- **Assesses students' knowledge**
- **Provides a personalized learning path**

Study 1

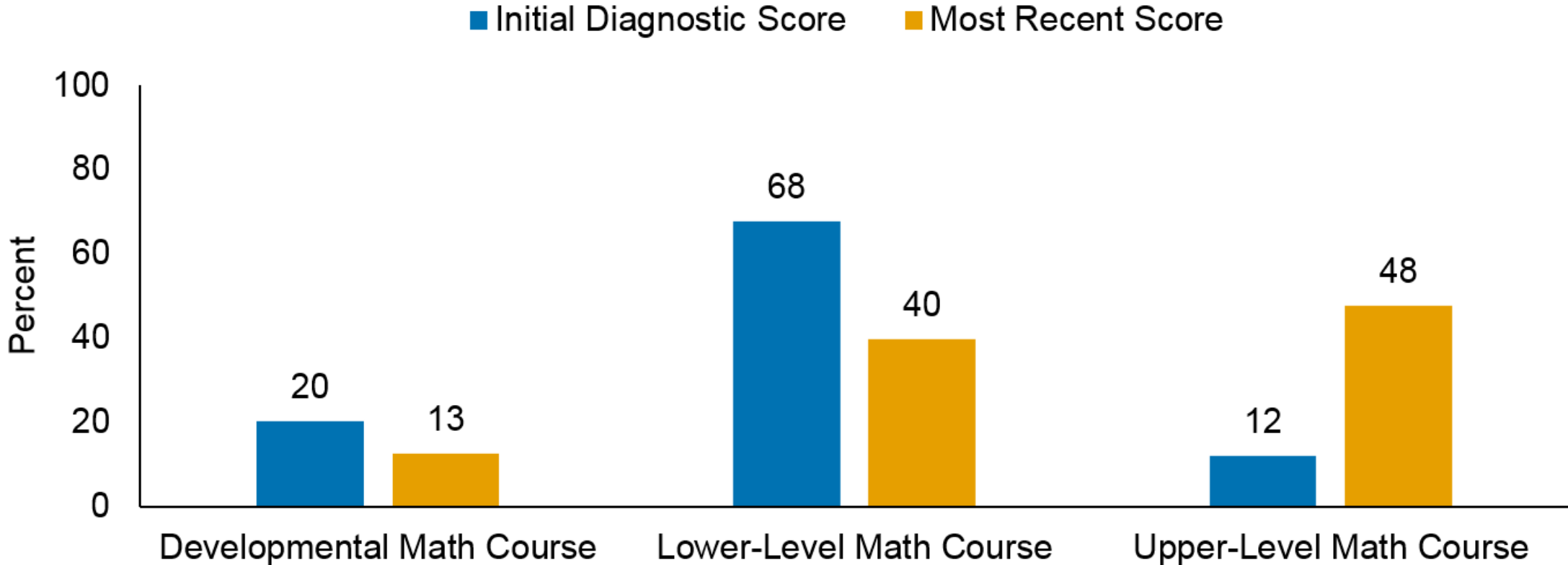
Mathematics

Jacksonville State University

- Fall 2015
- 753 entering students
- Offered EdReady during summer
- Two target scores for lower- and higher-level courses

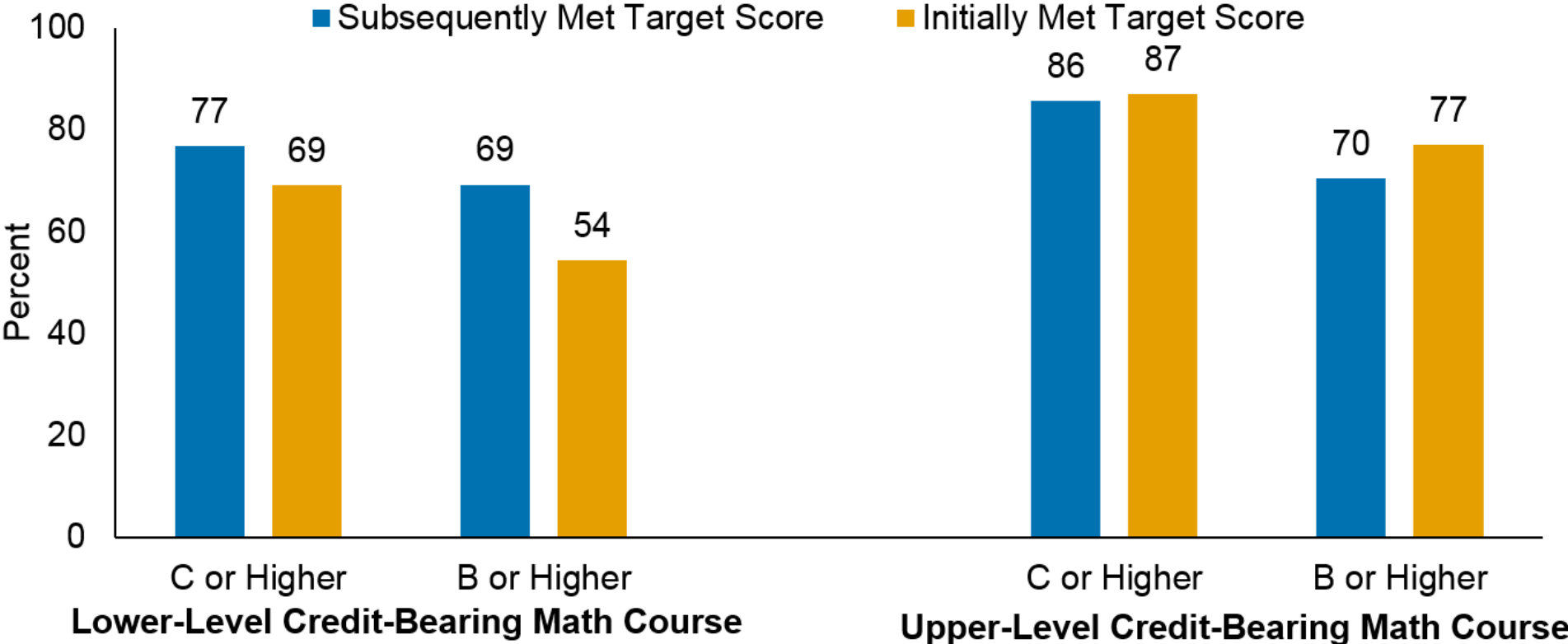
Study 1: Results

Suggested Math Placement at JSU by EdReady Mathematics Score



Study 1: Results

Percent Earning Course Grades among JSU Students Meeting EdReady Target Score



Study 2

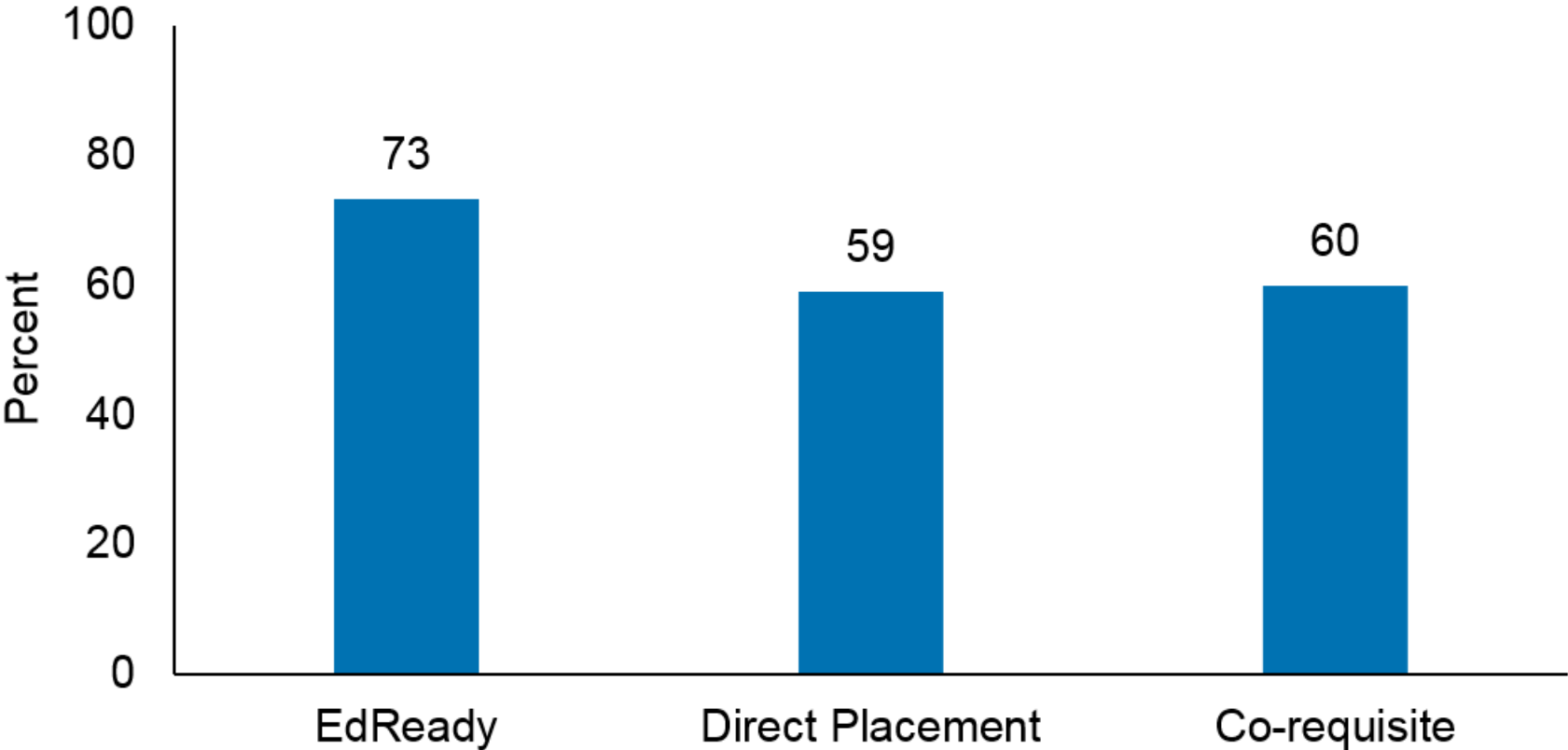
English

Chattanooga State Community College

- Fall 2017
- 847-1,297 entering students
- Course outcomes for three groups
 - Direct placement group
 - Co-requisite group
 - EdReady group

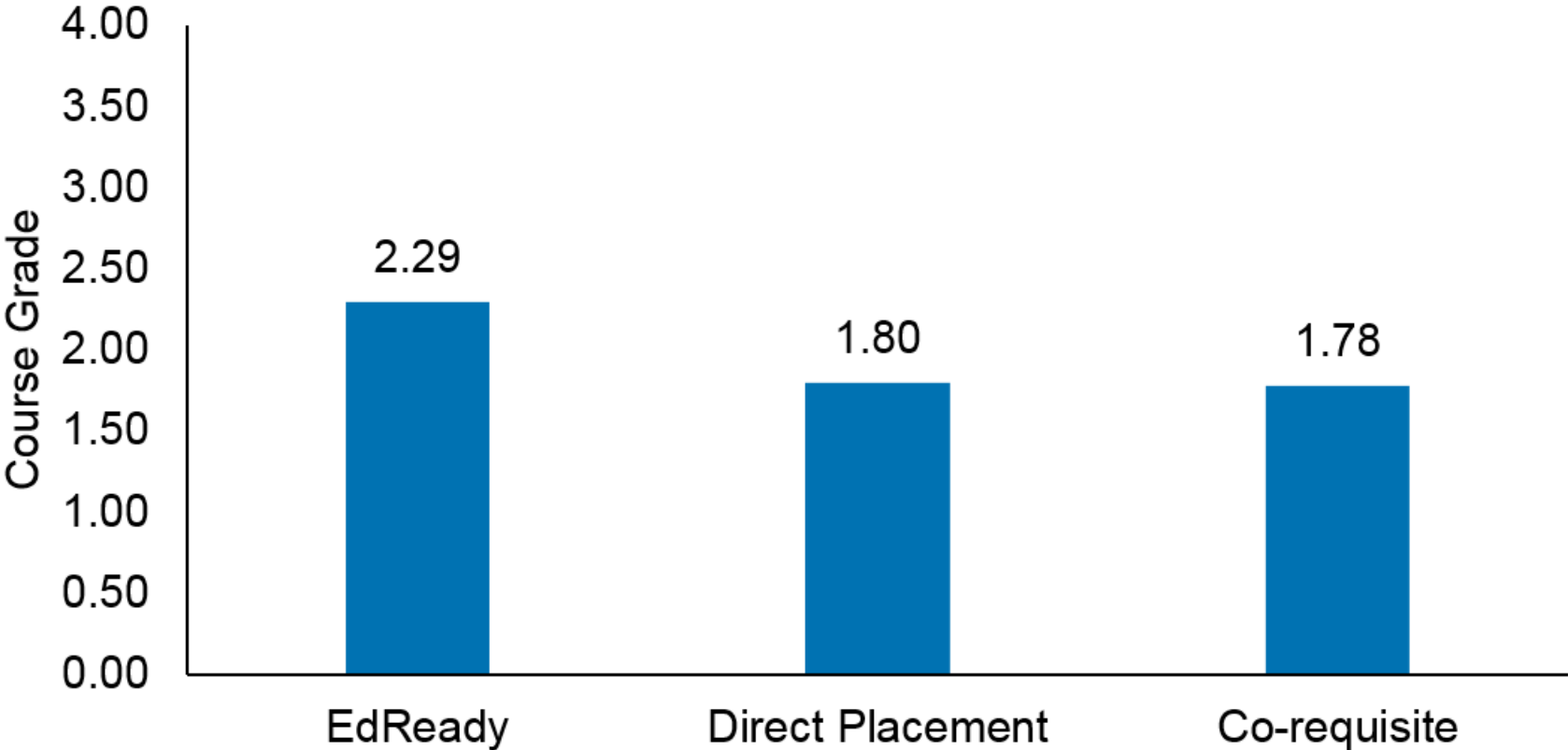
Study 2: Results

Predicted Pass Rate for First College-Level English Composition Course at ChSCC



Study 2: Results

Predicted Grade (4-Point Scale) for First College-Level English Composition Course at ChSCC



Conclusions

- Findings of these two studies are promising
- More research on CollegeReady is needed
- Interested in designing studies to make causal statements about the efficacy of CollegeReady

Research opportunities



Join ACT and other postsecondary institutions in one or more research opportunities:

DON'T MISS OUT!
Limited availability
Sign up by Aug. 15

COLLABORATIVE RESEARCH PARTNERSHIP OPPORTUNITIES

Contact
Research.Partnerships@act.org



HIGHER EDUCATION STUDY

Examine the use of ACT scores for predicting students' grades. Participating institutions and students will receive stipends.



NATIONAL ACT COLLEGE SUCCESS RESEARCH PARTNERSHIP

Collaborate on a broad research agenda related to student success and the use of ACT data.



ACT ENGLISH LANGUAGE ARTS (ELA) AND WRITING INITIATIVE

Examine relationships between scores and performance in postsecondary reading- and writing-intensive courses.



INTERNATIONAL STUDENT SUCCESS INITIATIVE

Examine relationships between ACT scores and first-year college performance for international students.



WORKKEYS/NCRC 2.0 EFFICACY STUDY

Examine relationships between ACT WorkKeys 2.0 scores and relevant performance outcomes (job performance ratings, productivity, grades, etc.).



Enrollment Management Databases

Explore ACT data in three new databases designed to inform higher education recruitment, enrollment, and success strategies. User Guides for each of the three databases are linked below.

Questions?