

# “Harmonizing Pathways, Corequisite Mathematics Courses and Success Coaches to Create a Symphony of Student Success”

Tina Ragsdale and Ben Hottel  
NOSS National Conference  
Nashville, TN



**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL **COLLEGE**

# Developmental Education Redesign



**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL **COLLEGE**

# Developmental Redesign

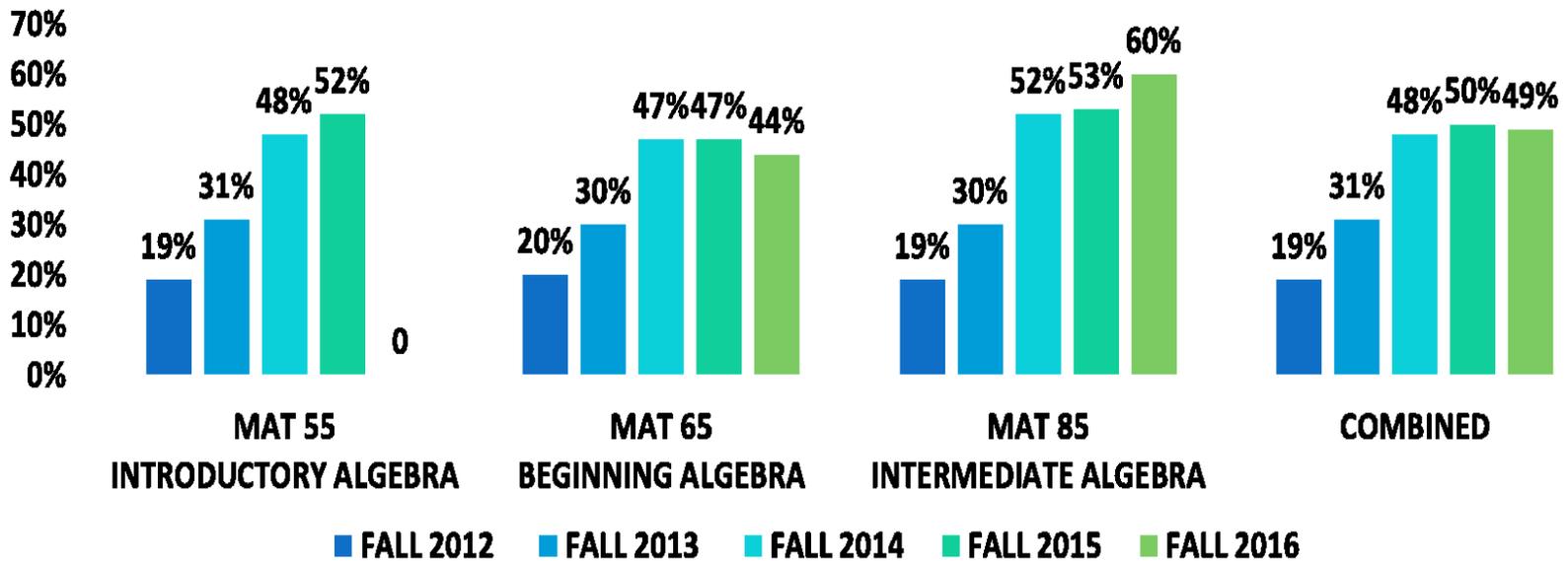
2010-2016

- Emporium - Modified
  - MAT 55 – Introductory Algebra
  - MAT 65 – Beginning Algebra
  - MAT 85 – Intermediate Algebra



# Redesign Data

Percent of Enrolled Students Successful  
Successful = A, B, C or P (Pass)

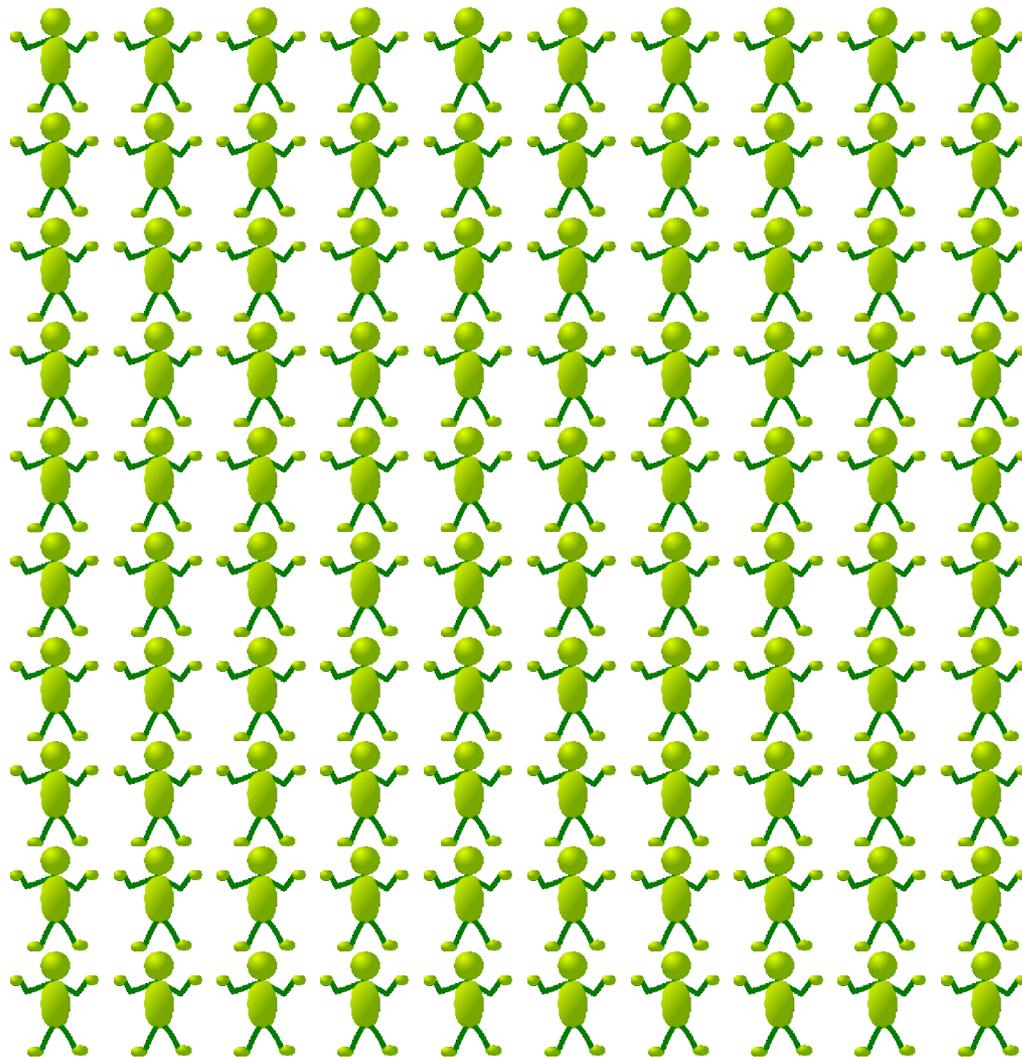


# Developmental Results 2012-2016

- Interventions increased student success within courses
- Interventions decreased student attrition within courses
- The number of students moving forward into college-level courses and successfully completing those courses did not change drastically

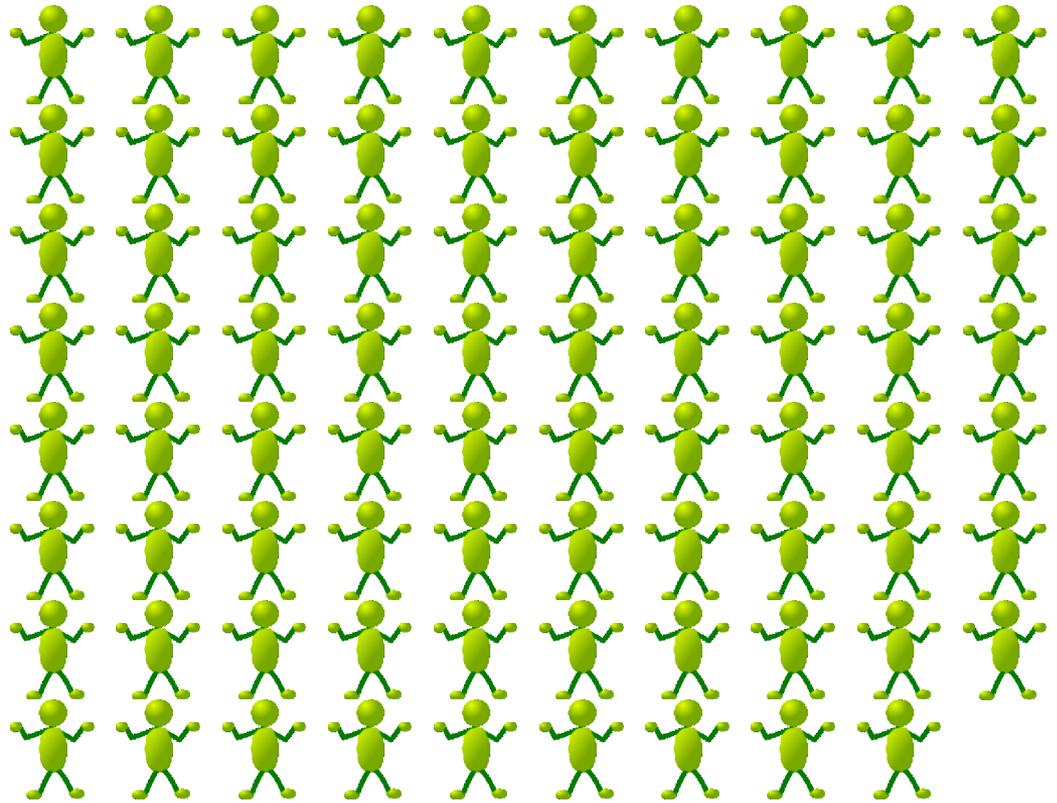


100 Students  
Enrolled in  
MAT 65  
Beginning  
Algebra



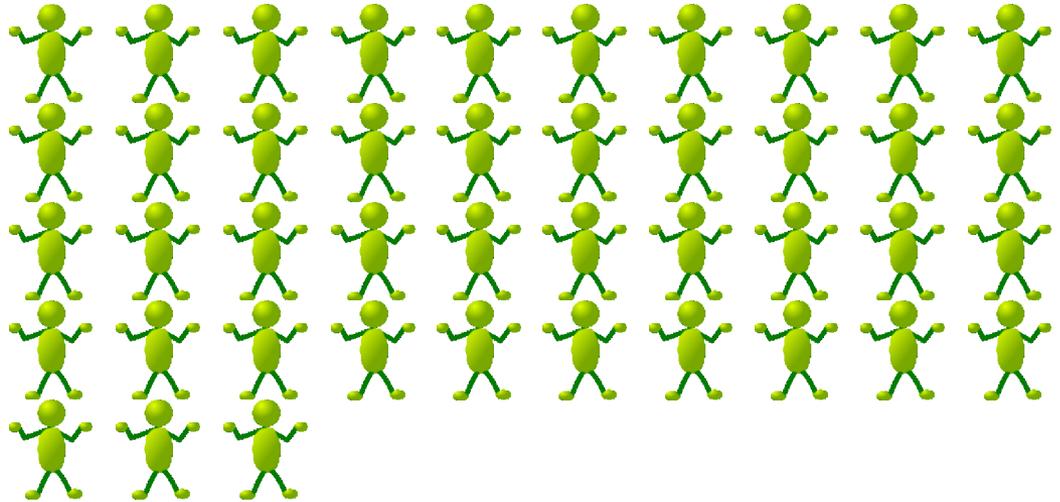
**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL **COLLEGE**

79 Students  
Enrolled in  
MAT 85  
Intermediate  
Algebra



**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL COLLEGE

43 Students  
Passed  
MAT 85  
Intermediate  
Algebra



**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL COLLEGE



19 Students  
Enrolled in  
MAT 150  
College  
Algebra



**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL **COLLEGE**



5 Students  
Passed  
MAT 150  
College  
Algebra



**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL **COLLEGE**

During the same time as  
the Dev. Ed. Redesign . . .



**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL **COLLEGE**



- Accelerating Opportunity Kentucky (AOKY)
  - Started in Spring 2012
  - Designed for GED-seeking students only
  - Applied Technology programs only



**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL COLLEGE

# Applied Technology Students

- Didn't complete math
- Didn't attain the diploma or degree
- Weren't getting past barrier courses

# AOKY - Planning for Fall 2015

- Re-Thinking Model
- Seeking a sustainable model beyond AOKY
- Benefitting broader population of students



## **Assessment and Placement policy changes**

- Eliminated lowest level developmental education (MAT 55)
- Allowed more co-requisite sections
- Allowed flexibility for placement with supplemental instruction

## **Research and data on co-requisite and cohorts**

- Increases Self-efficacy
- Increases Motivation
- Cohorts provide Accountability



# New Program



**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL **COLLEGE**

# Components of the Program



**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL COLLEGE

# Program Structure



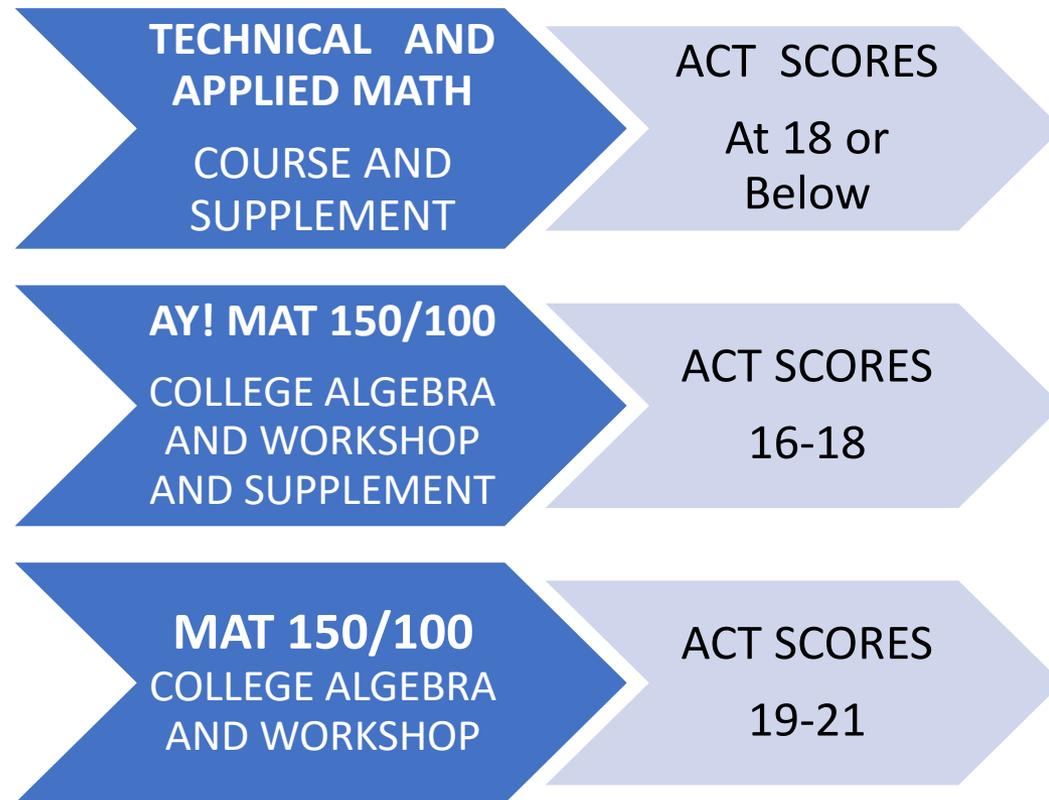
- Mixed cohort design
- Preset 1<sup>st</sup> semester schedule
  - Includes First-year experience, college-level math, and core courses (or technical courses)
- Contextualized content
- Focus on barrier courses toward completion of credential
- Embedded Tutors (Success coaches)



Fall 2015-Spring 2019

# ACCELERATED PLACEMENT Math

- Lowest level courses have been eliminated
- One Developmental Course Per Pathway available - optional
- Most AY! students complete only 1 semester of college level math



# Traditional

- **College Algebra (MAT 150) - 3 Credit Hours**
  - **ACT  $\geq$  22**
  - **Or Completion of MAT 71**
    - **3 credit Dev. Ed. pathway course leads directly to college algebra (ACT 16 -21)**
- **2 Days a Week**
  - **1 hour 15 minutes per day**



# Co-Requisite

- **College Algebra (MAT 150) - 3 Credit Hours**
- **Workshop (MAT 100) - 2 Credit Hours**
  - **ACT 19-20**
  - **Or Completion of MAT 61**
    - **4 credit Dev. Ed. pathway course leads to college algebra with workshop (ACT 14-15)**
- **4 Days a Week**
  - **College Algebra - 40 minutes a day**
  - **Workshop - 25 minutes per day**
  - **Paired Courses**



# Accelerate You!

- College Algebra (MAT 150) - 3 Credit Hours
- Workshop (MAT 100) - 2 Credit Hours
  - **ACT 16-18 or Approval of AY!**
  - Success Coach (1 hour per week in class)
  - AOCCR (1 hour per week with Coach)
  - Mixed Cohorts with Expanded Band
  - 4 Days a Week
    - College Algebra - 40 minutes a day
    - Workshop - 25 minutes per day



# Success Coaches

- CRLA Tutoring certification, Bachelor or Master degree, prior experience working with students on various levels
- “Embedded Tutor”
  - In-class
    - Attends 50%-100% of math course
    - Attends 25%-50% of technical/general education course
    - Team-teaching (varies by class/instructor)
    - Monitor
    - Group facilitator
    - “Fake student”
    - Helps as needed during class



# Success Coach Roles

- Outside of class
  - Build Relationships
    - liaison between instructors
    - provide direction to necessary resources on campus and community
  - Monitor and Tracking
    - Progress, flags, grades
- AOCCR (Required one hour/week supplemental instruction, no charge)
  - Tutor/Reinforce learning/Reteaches
  - Study skills, note-taking skills, reading strategies
  - Other students can attend



# Program Evolution



**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL **COLLEGE**

# Changes

- Enrollment
  - Academic Year 2015-2016
    - 21 students                      2 part-time Success Coaches
  - Academic Year 2016-2017
    - 68 students                      4 part-time Success Coaches
  - Academic Year 2017-2018
    - 77 students                      4 part-time Success Coaches
  - Academic Year 2018-2019
    - 156 students                      2 full-time and 2 part-time Success Coaches
  - Academic Year 2019 (fall only)
    - 160 students                      2 full-time and 2 part-time Success Coaches

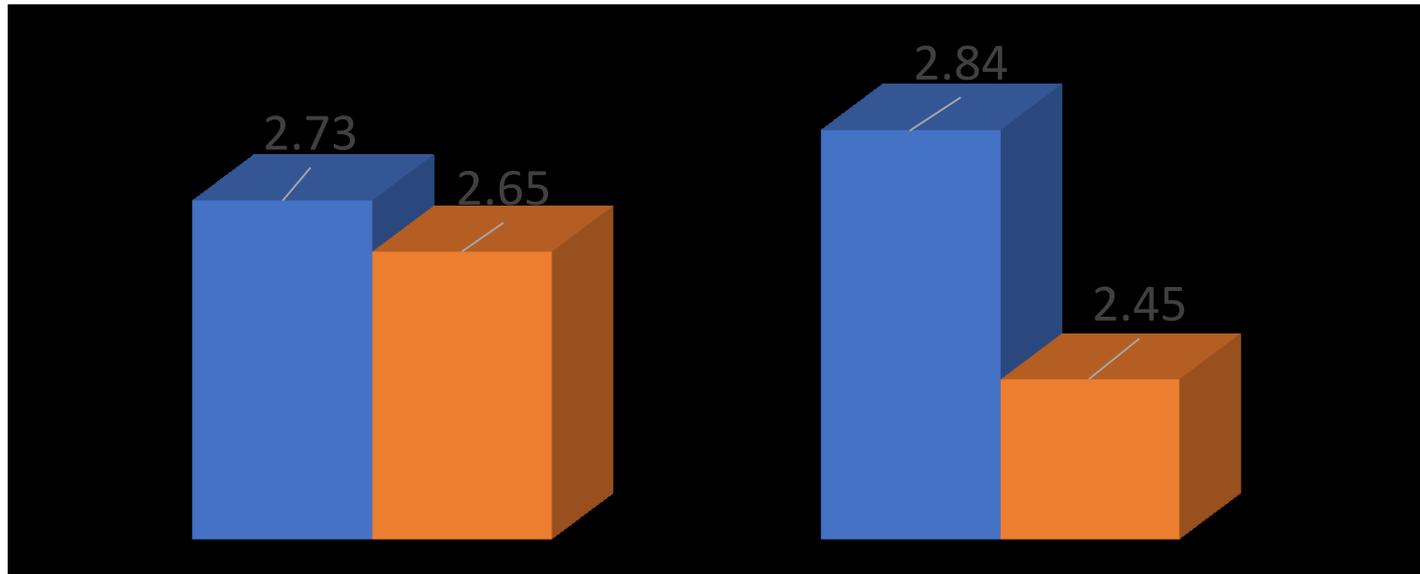


# Changes

- Programs
  - 2015-2017
    - Applied Technologies (AT)
    - Health Science Technology (HST)
  - 2017
    - AT, HST
    - Interdisciplinary Early Childhood Education (IECE)
    - Criminal Justice (CRJ)
  - 2018
    - AT, HST, IECE, CRJ
    - Business
    - Visual Communications
  - 2019
    - Focus on English and required math course, not program



## Fall 2016-Fall 2018 Average GPA



Applied Technology

Health Science Technology

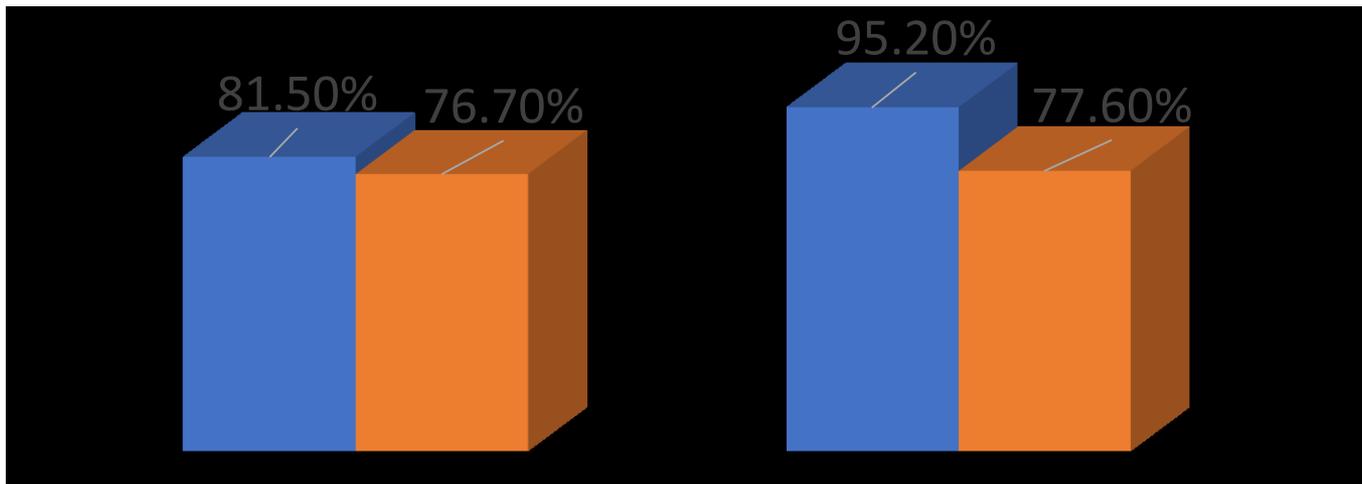
■ Accelerate You! students

■ Other students in same courses



**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL **COLLEGE**

## Fall 2016-Fall 2018 Average Retention (fall to spring)



Applied Technology

Health Science Technology

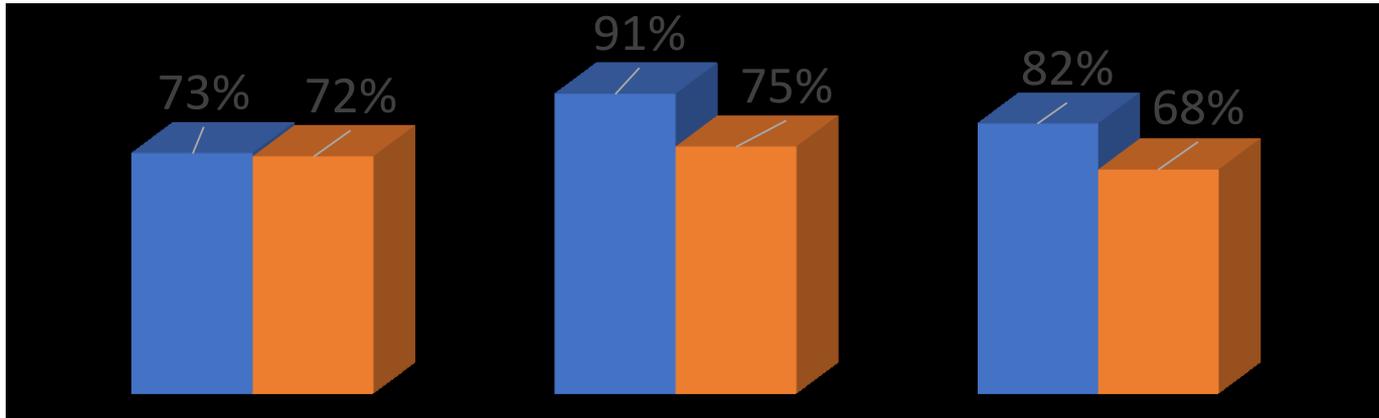
■ Accelerate You! students

■ Other students in same courses



**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL COLLEGE

# Course Success



MAT 116

(Fall 15-Spring 19)

MAT 100/150

(Fall 16-Spring 19)

ENG 101

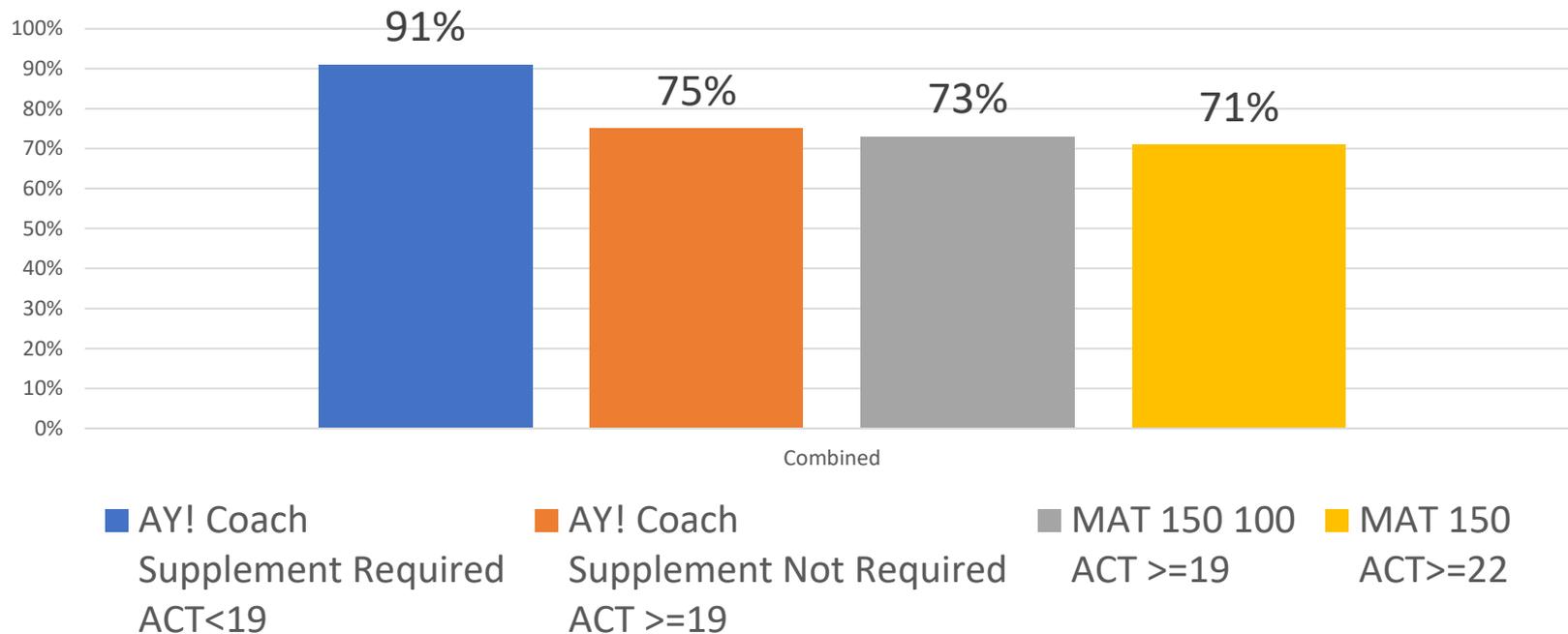
(Spring 17-Spring 19)

- Accelerate You! student success in course
- Other student success taking the same course

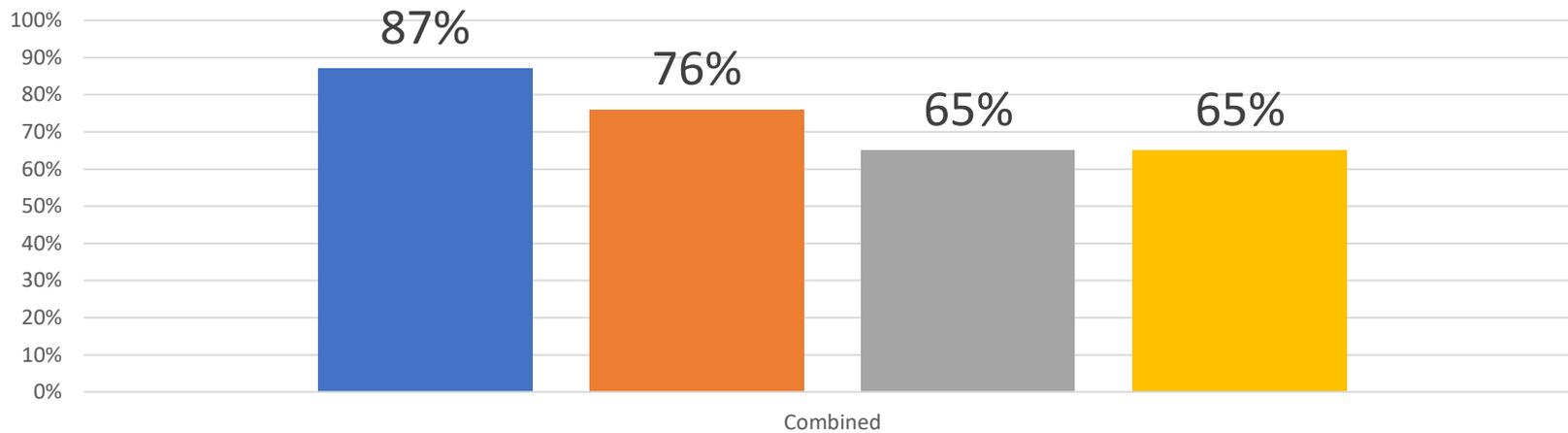


**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL COLLEGE

## Fall 16 - Spring 19 Combined ABCD Success Rates – Comparing Course Structure



## Co-Requisite College Algebra Success (ABC) Rates 3-Year Combined Data (Fall 2016 - Spring 2019)

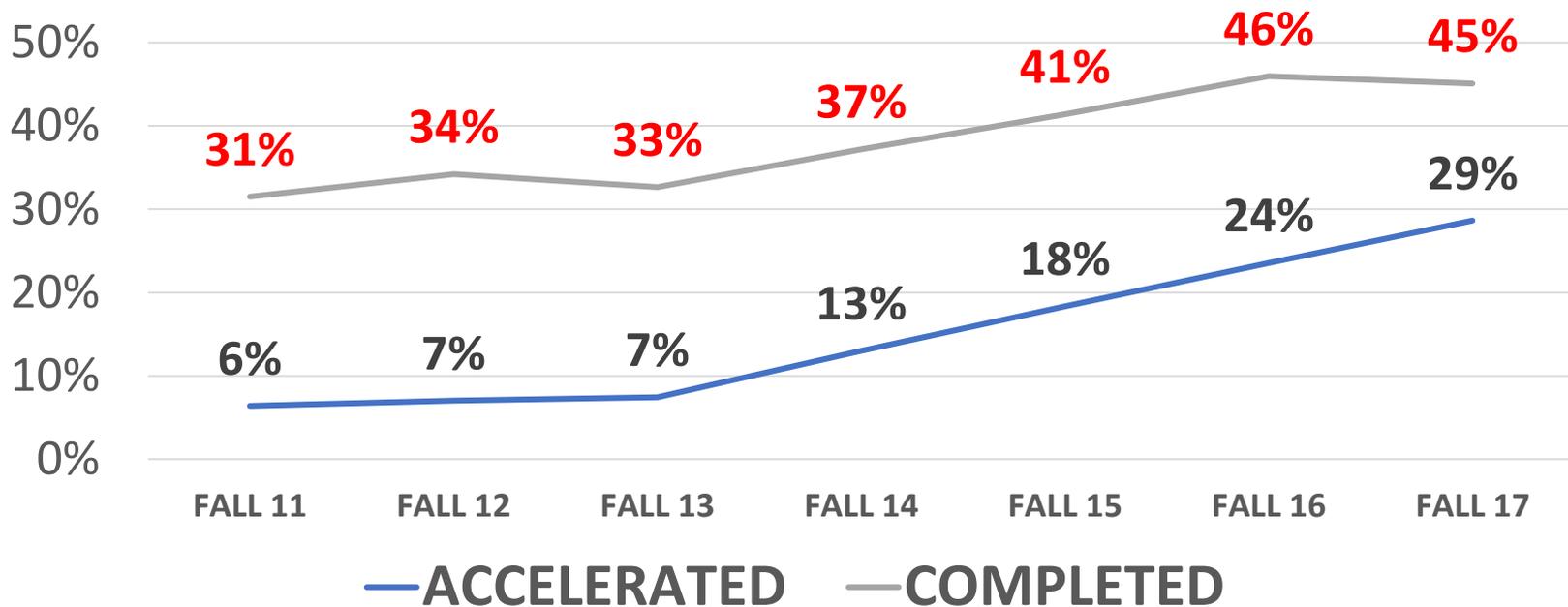


- MAT 150 100, AY! Coach, and Supplement Required (ACT<19) N=68
- MAT 150 100, AY! Coach, and Supplement Not Required (ACT >=19) N=105
- MAT 150 100 (ACT >=19) N=307
- MAT 150 (ACT>=22) N=971



# Developmental Redesign

## ACCELERATED - COMPLETED COLLEGE LEVEL MATH



	Fall 2019	Per Academic Year	Totals
Students	130	\$182 per credit X 24 credits = \$4,368	\$4,368 X 130 students
Revenue			+\$567,840
Personnel	2 Full-time	\$30,000 salary + \$13,050 benefits = \$43,050 (each)	\$86,100
	2 Part-time	\$18,500 (each)	\$37,000
Expenses			-\$123,100
Return on Investment			<b>+\$444,740</b>



# THANK YOU

Tina Ragsdale

WKCTC Developmental Math Coordinator

Associate Professor of Mathematics

TINA.RAGSDALE@KCTCS.EDU

Ben Hottel

WKCTC Educational Specialist

AY! Success Coach

BHOTTEL0001@KCTCS.EDU



**WEST KENTUCKY**  
COMMUNITY  
& TECHNICAL COLLEGE